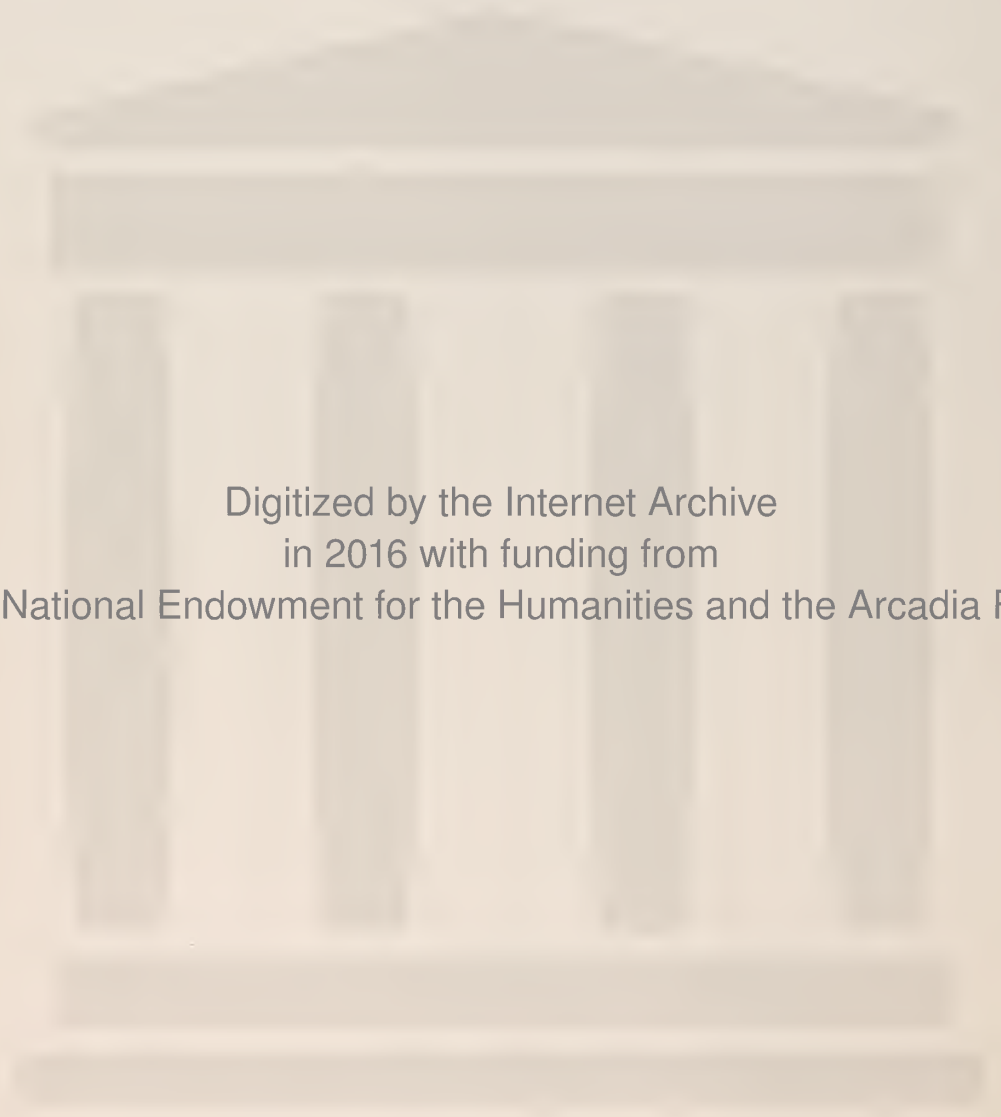
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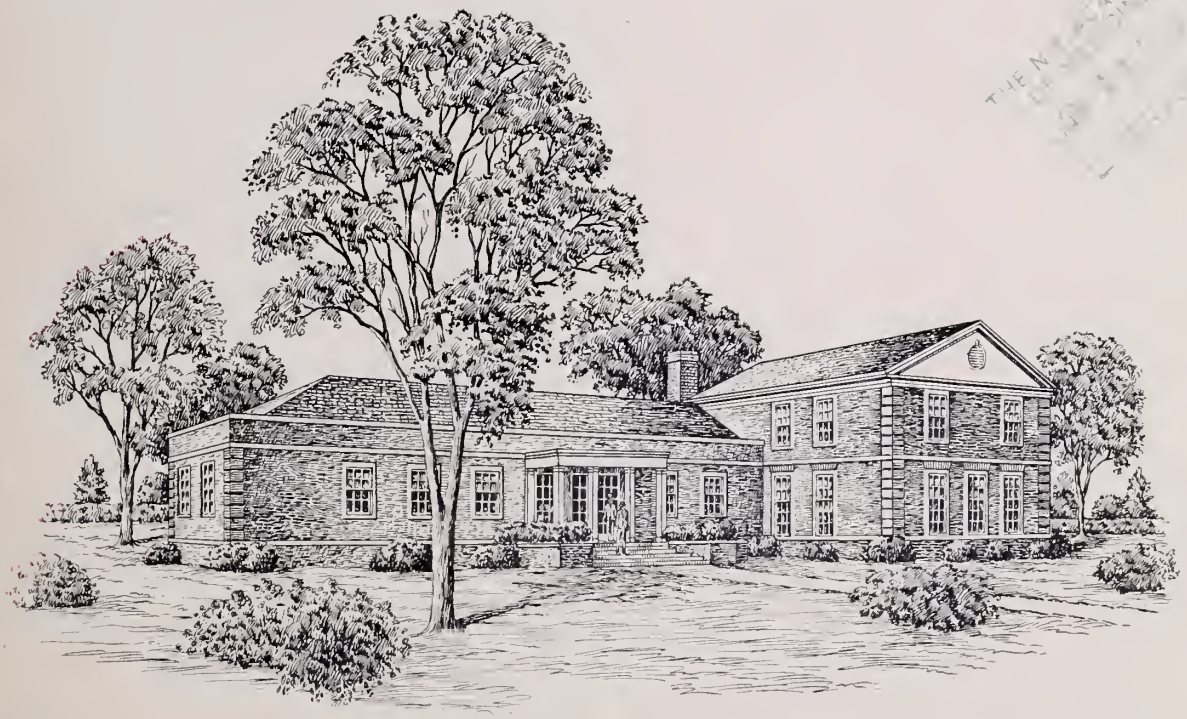
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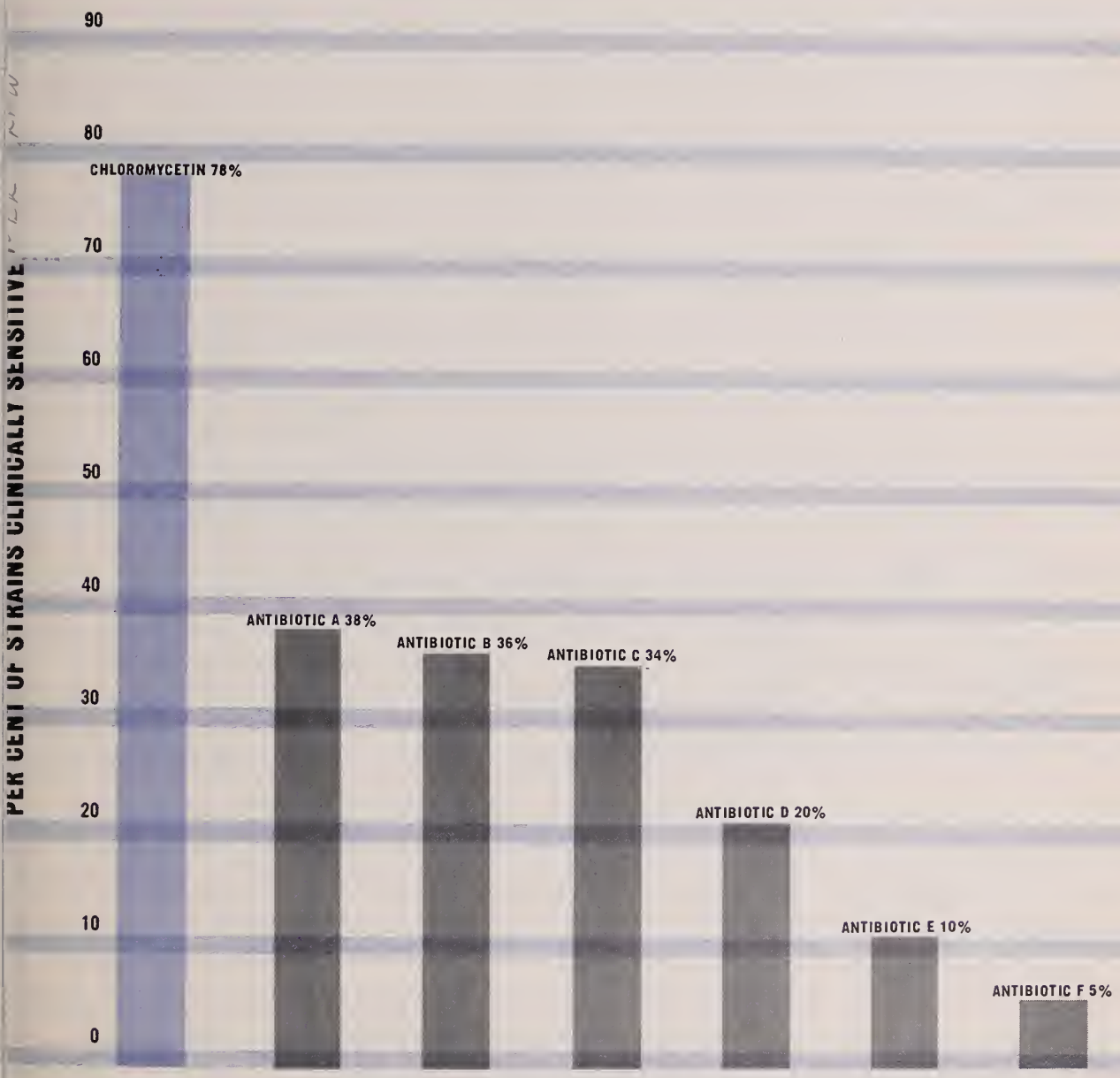
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*This graph is adapted from Waisbren and Strelitzer.[15] It represents *in vitro* data obtained with clinical material isolated between the years 1951 and 1956. Inhibitory concentrations, ranging from 3 to 25 mcg. per ml., were selected on the basis of usual clinical sensitivity.

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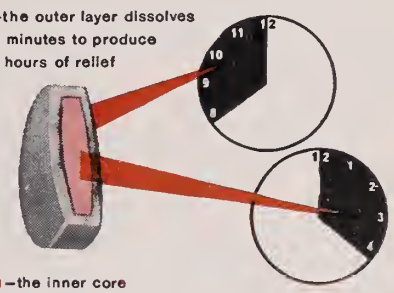
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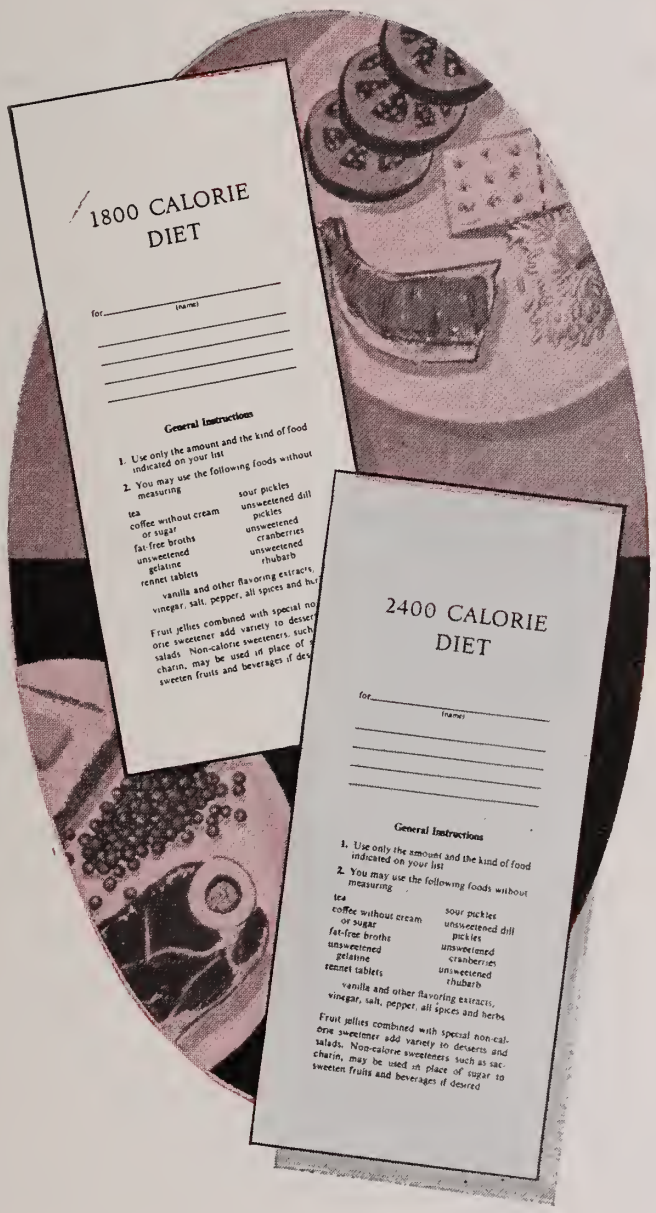
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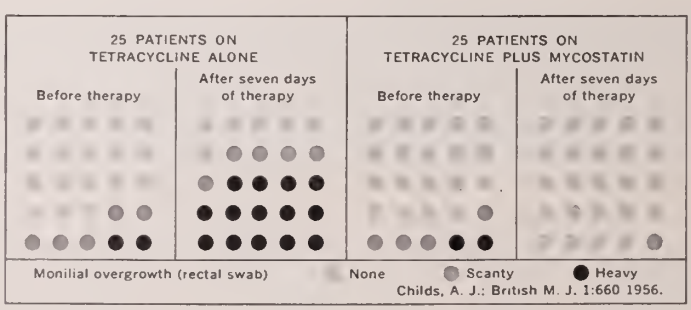
Capsules (250 mg./250,000 u.), bottles of 16 and 100. *Half-Strength Capsules* (125 mg./125,000 u.), bottles of 16 and 100. *Suspension* (125 mg./125,000 u.), 2 oz. bottles. *Pediatric Drops* (100 mg./100,000 u.), 10 cc. dropper bottles.

SQUIBB

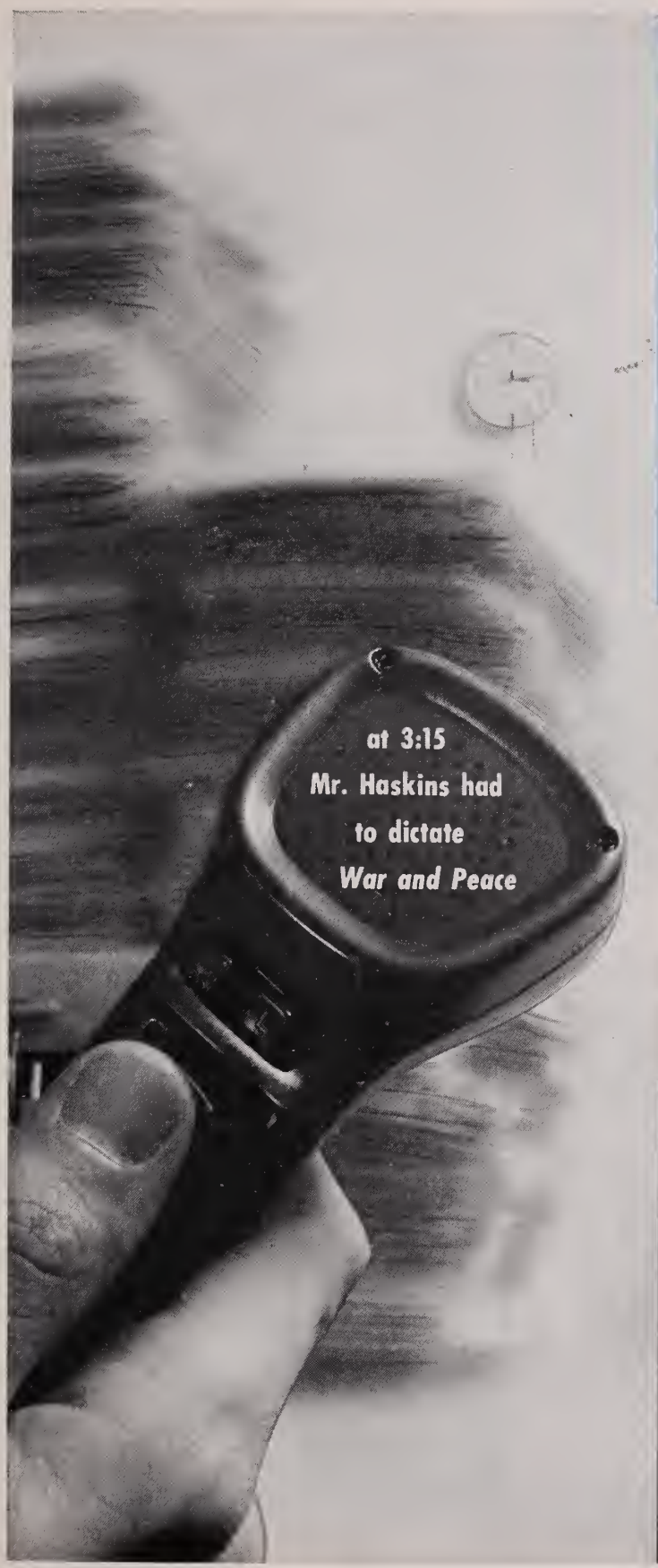
Squibb Quality—the Priceless Ingredient

"MYSTECLIN-V," "MYCOSTATIN" AND "SUMYCIN" ARE SQUIBB TRADEMARKS

MYSTECLIN-V PREVENTS MONILIAL OVERGROWTH



Childs, A. J.: British M. J. 1:660 1956.



To cut daytime lethargy
(and keep rauwolfia potency)
in treatment
of hypertension:

Additional clinical evidence[1] supports the view that HARMONYL offers full rauwolfia potency coupled with much less lethargy. In a new comparative study HARMONYL was given at the same dosage as reserpine and other rauwolfia alkaloids. Only one HARMONYL patient in 20 showed lethargy, while 11 patients in 20 showed lethargy with reserpine; 10 in 20 with the alseroxylon fraction.

Abbott

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for your hypertensives
who must stay on the job

Harmonyl*

while the drug works effectively . . .
so does the patient

*Trademark for Deserpidine, Abbott

1. Comparative Effects of Various Rauwolfia Alkaloids in Hypertension; *submitted for publication.*



in anxiety and hypertension

NEW *fast-acting*

Harmonyl-N*

(Harmonyl* and Nembutal®)

Calmer days, more restful nights starting *first* day of treatment, through synergistic action of HARMONYL (Deserpidine, Abbott) and NEMBUTAL (Pentobarbital, Abbott). Lower therapeutic doses, lower incidence of side effects. Each HARMONYL-N Filmtab contains 30 mg. NEMBUTAL Calcium and 0.25 mg. HARMONYL. Each HARMONYL-N *Half-Strength* Filmtab combines 15 mg. NEMBUTAL Calcium and 0.1 mg. HARMONYL. Abbott

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Each pill is equivalent to one USP Digitalis Unit

Physiologically Standardized therefore always dependable.

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for sound obesity management
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With my anemia, I'll never make it up that high

ROETINIC®
one capsule a day, for all treatable anemias

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when more than a hematinic is indicated



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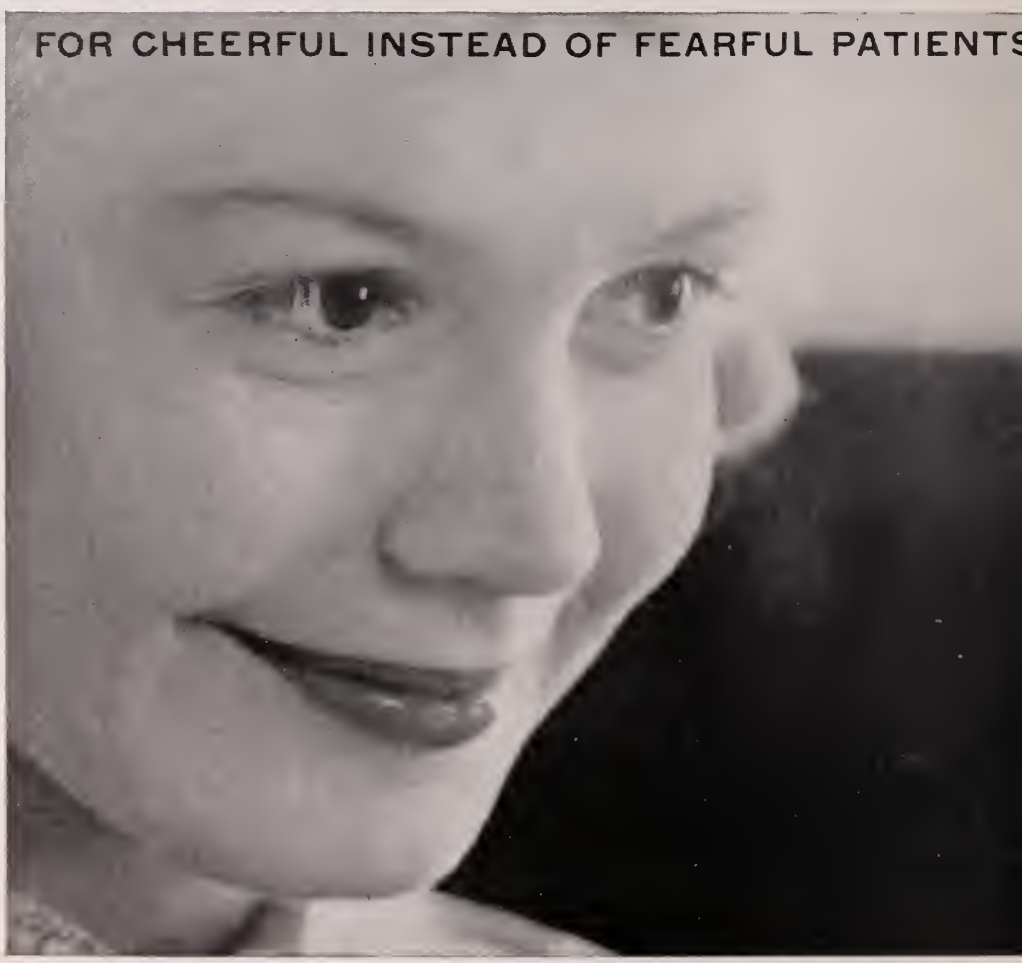
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sublingually for

fast relief

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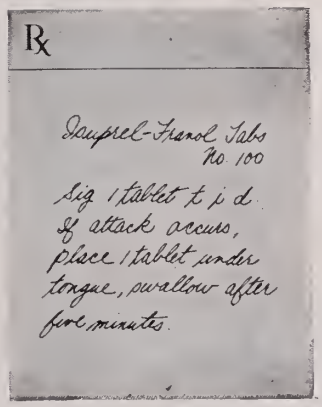
w Isuprel-Franol tablets bring
ınd-the-clock relief *plus* emergency
p against sudden attack. Anxiety
ps when patients know they'll get
ief in 60 seconds — relief that con-
ues for four hours or more.

ıprel HCl (10 mg. for adults, 5 mg.
· children), the most potent broncho-
ator known, makes up the outer
ıting. In a sudden attack, the patient
ts the tablet under his tongue. Relief
ırts in 60 seconds. A unique feature
the "flavor-timer." As the Isuprel is
sorbed a lemon flavor appears. When
disappears—about five minutes later
the patient swallows the tablet.

ı unexcelled combination for pro-
ıged bronchodilatation makes up the
ıprel-Franol core: benzylephedrine
Cl (32 mg.), Luminal® (8 mg.) and
eophylline (130 mg.). Swallowed, the
blet works for four hours or more.

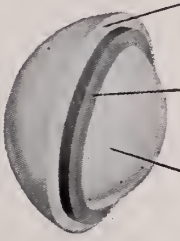
uprel-Franol tablets are "...effec-
ve in controlling over 80% of
tients with mild to moderate
tacks of asthma."[1]

Fromer, J. L., and DeRisio,
J.: *Lahey Clin. Bull.* 10:45,
t.-Dec., 1956.



ISUPREL-FRANOL tablets (Isuprel HCl 10 mg.) for adults;
ISUPREL-FRANOL Mild tablets (Isuprel HCl 5 mg.) for children:
One tablet every three or four hours taken *orally* for continuous control of bronchospasm in chronic asthma. One tablet taken *sublingually* for sudden attack. "Flavor-timer" signals when patient should swallow.
Bottles of 100 tablets.

"Flavor-timer" signals patients when to swallow tablets



ISUPREL
Immediate effect sublingually—for emergency use

LEMON "FLAVOR-TIMER"
Disappearance of flavor is the signal to swallow

FRANOL { Theophylline / Luminal / Benzylephedrine
Sustained action—reduces frequency and intensity of attacks

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TETRACYCLINE-ANTIHISTAMINE-ANALGESIC COMPOUND

ACHROCIDIN is a well-balanced, comprehensive formula for treating acute upper respiratory infections.

Debilitating symptoms of malaise, headache, pain, mucosal and nasal discharge are rapidly relieved.

Early, potent therapy is offered against disabling complications to which the patient may be highly vulnerable, particularly during febrile respiratory epidemics or when questionable middle ear, pulmonary, nephritic, or rheumatic signs are present.

ACHROCIDIN is convenient for you to prescribe—easy for the patient to take. Average adult dose: two tablets, or teaspoonfuls of syrup, three or four times daily.

tablets

ACHROMYCIN® Tetracycline	125 mg.
Phenacetin	120 mg.
Caffeine	30 mg.
Salicylamide	150 mg.
Chlorothen Citrate	25 mg.

Bottle of 24 tablets

syrup

Each teaspoonful (5 cc.) contains:

ACHROMYCIN® Tetracycline equivalent to tetracycline HCl	125 mg.
Phenacetin	120 mg.
Salicylamide	150 mg.
Ascorbic Acid (C)	25 mg.
Pyrilamine Maleate	15 mg.
Methylparaben	4 mg.
Propylparaben	1 mg.

Availuble on prescription only

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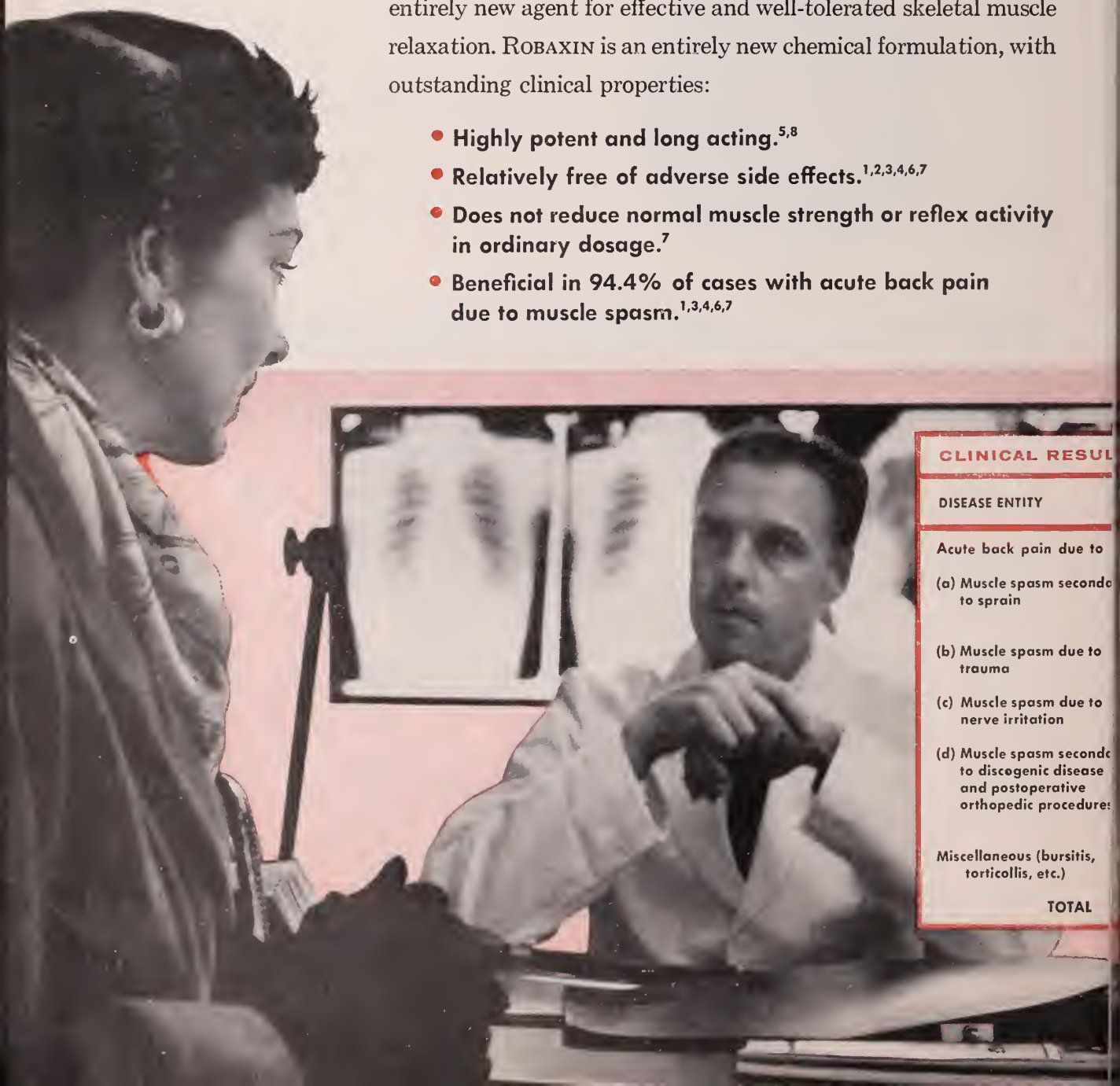
Significant **Robins** research discovery:

A NEW SKELETAL MUSCLE RELAXANT

Ro

ROBAXIN – synthesized in the Robins Research Laboratories, and intensively studied for five years – introduces to the physician an entirely new agent for effective and well-tolerated skeletal muscle relaxation. ROBAXIN is an entirely new chemical formulation, with outstanding clinical properties:

- **Highly potent and long acting.**[5,8]
- **Relatively free of adverse side effects.**[1,2,3,4,6,7]
- **Does not reduce normal muscle strength or reflex activity in ordinary dosage.**[7]
- **Beneficial in 94.4% of cases with acute back pain due to muscle spasm.**[1,3,4,6,7]



CLINICAL RESUL	
DISEASE ENTITY	
Acute back pain due to	
(a) Muscle spasm seconda to sprain	
(b) Muscle spasm due to trauma	
(c) Muscle spasm due to nerve irritation	
(d) Muscle spasm seconda to discogenic disease and postoperative orthopedic procedures	
Miscellaneous (bursitis, torticollis, etc.)	
TOTAL	



baxin®

(Methocarbamol Robins, U.S. Pat. No. 2770649)

Highly specific action

ROBAXIN is highly specific in its action on the internuncial neurons of the spinal cord – with inherently sustained repression of multisynaptic reflexes, but with no demonstrable effect on monosynaptic reflexes. It thus is useful in the control of skeletal muscle spasm, tremor and other manifestations of hyperactivity, as well as the pain incident to spasm, without impairing strength or normal neuromuscular function.

Beneficial in 94.4% of cases tested

When tested in 72 patients with acute back pain involving muscle spasm, ROBAXIN induced marked relief in 59, moderate relief in 6, and slight relief in 3 – or an over-all beneficial effect in 94.4%.[1,3,4,6,7] No side effects occurred in 64 of the patients, and only slight side effects in 8. In studies of 129 patients, moderate or negligible side effects occurred in only 6.2%.[1,2,3,4,6,7]

TH ROBAXIN IN ACUTE BACK PAIN[1,3,4,6,7]

OF ES	DURATION OF TREATMENT	DOSE PER DAY (divided)	RESPONSE marked	mod.	slight	neg.	SIDE EFFECTS
	2-42 days	3-6 Gm.	17	1	0	0	None, 16 Dizziness, 1 Slight nausea, 1
	1-42 days	2-6 Gm.	8	1	3	1	None, 12 Nervousness, 1
	4-240 days	2.25-6 Gm.	4	1	0	0	None, 5
	2-28 days	1.5-9 Gm.	24	3	0	3	None, 25 Dizziness, 1 Lightheadedness, 2 Nausea, 2 *
	3-60 days	4-8 Gm.	6	0	0	0	None, 6
			59	6	3	4	*Relieved on reduction of dose

References: 1. Carpenter, E. B.: Publication pending. 2. Carter, C. H.: Personal communication. 3. Forsyth, H. F.: Publication pending. 4. Freund, J.: Personal communication. 5. Morgan, A. M., Truitt, E. B., Jr., and Little, J. M.: American Pharm. Assn. 46:374, 1957. 6. Nachman, H. M.: Personal communication. 7. O'Doherty, D.: Publication pending. 8. Truitt, E. B., Jr., and Little, J. M.: J. Pharm. & Exper. Therap. 119:161, 1957.

Indications – Acute back pain associated with: (a) muscle spasm secondary to sprain; (b) muscle spasm due to trauma; (c) muscle spasm due to nerve irritation; (d) muscle spasm secondary to discogenic disease and postoperative orthopedic procedures; and miscellaneous conditions, such as bursitis, fibrositis, torticollis, etc.

Dosage – Adults: Two tablets 4 times daily to 3 tablets every 4 hours. Total daily dosage: 4 to 9 Gm. in divided doses.

Precautions – There are no specific contraindications to Robaxin and untoward reactions are not to be anticipated. Minor side effects such as lightheadedness, dizziness, nausea may occur rarely in patients with unusual sensitivity to drugs, but disappear on reduction of dosage. When therapy is prolonged routine white blood cell counts should be made since some decrease was noted in 3 patients out of a group of 72 who had received the drug for periods of 30 days or longer.

Supply – Robaxin Tablets, 0.5 Gm., in bottles of 50.

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OUR BENEFITS TO YOU ARE COMPLETE RELEASE OF CAPITAL

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If You Would Like to Have Our Doctor's Leasing Plan Explained to You In Detail, Please Call or Write. We Will Manage to Have One of Our Representatives Call On You at Your Convenience.

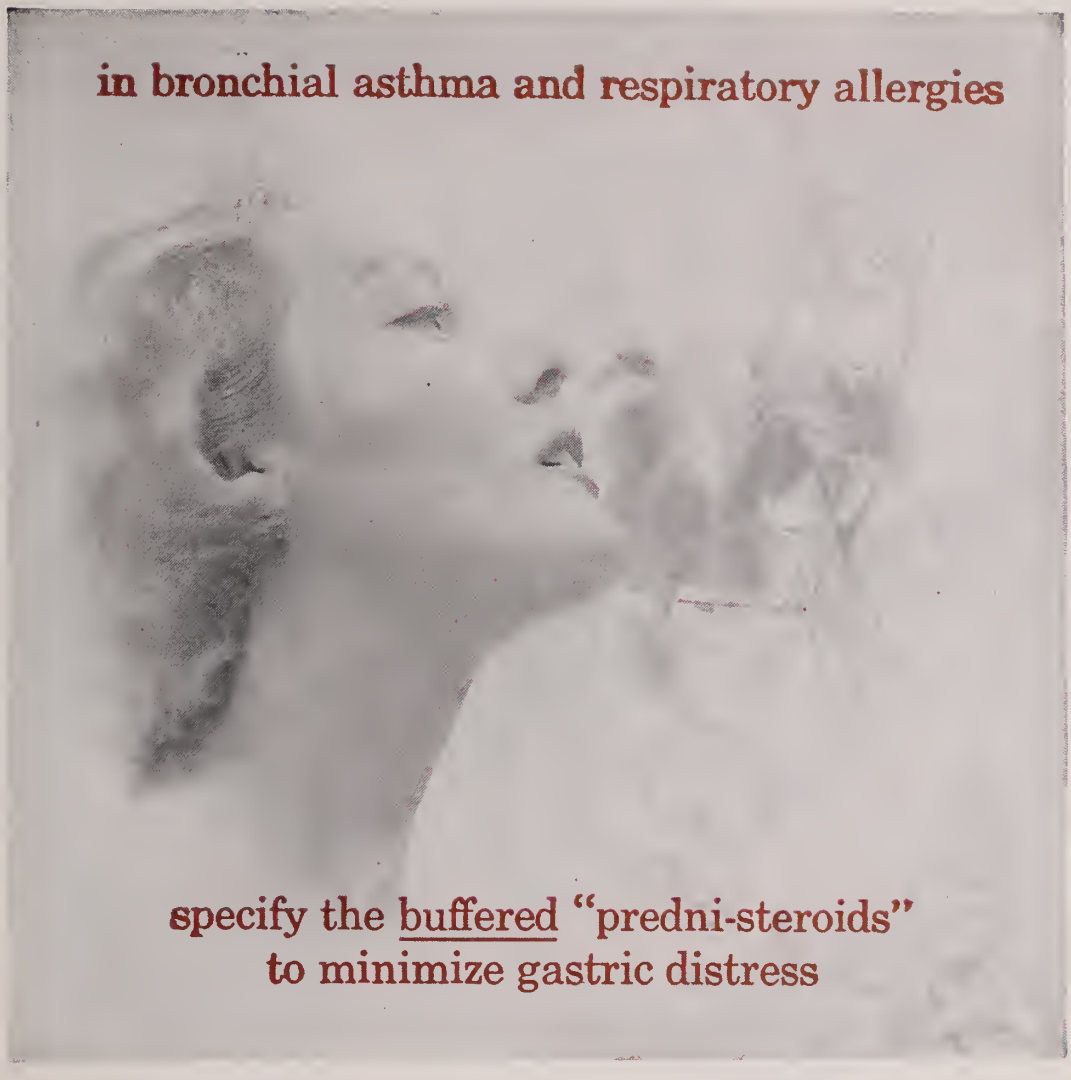
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'Co-Deltra' or 'Co-Hydeltra' provides all the benefits of "predni-steroid" therapy and minimizes the likelihood of gastric distress which might otherwise impede therapy. They provide easier breathing—and smoother control—in bronchial asthma or stubborn respiratory allergies.

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2.5 mg. or 5.0 mg. of prednisone or prednisolone, plus 300 mg. of dried aluminum hydroxide gel and 50 mg. of magnesium trisilicate.

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minor chemical changes can mean major therapeutic improvements

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The most efficient of all anti-inflammatory steroids

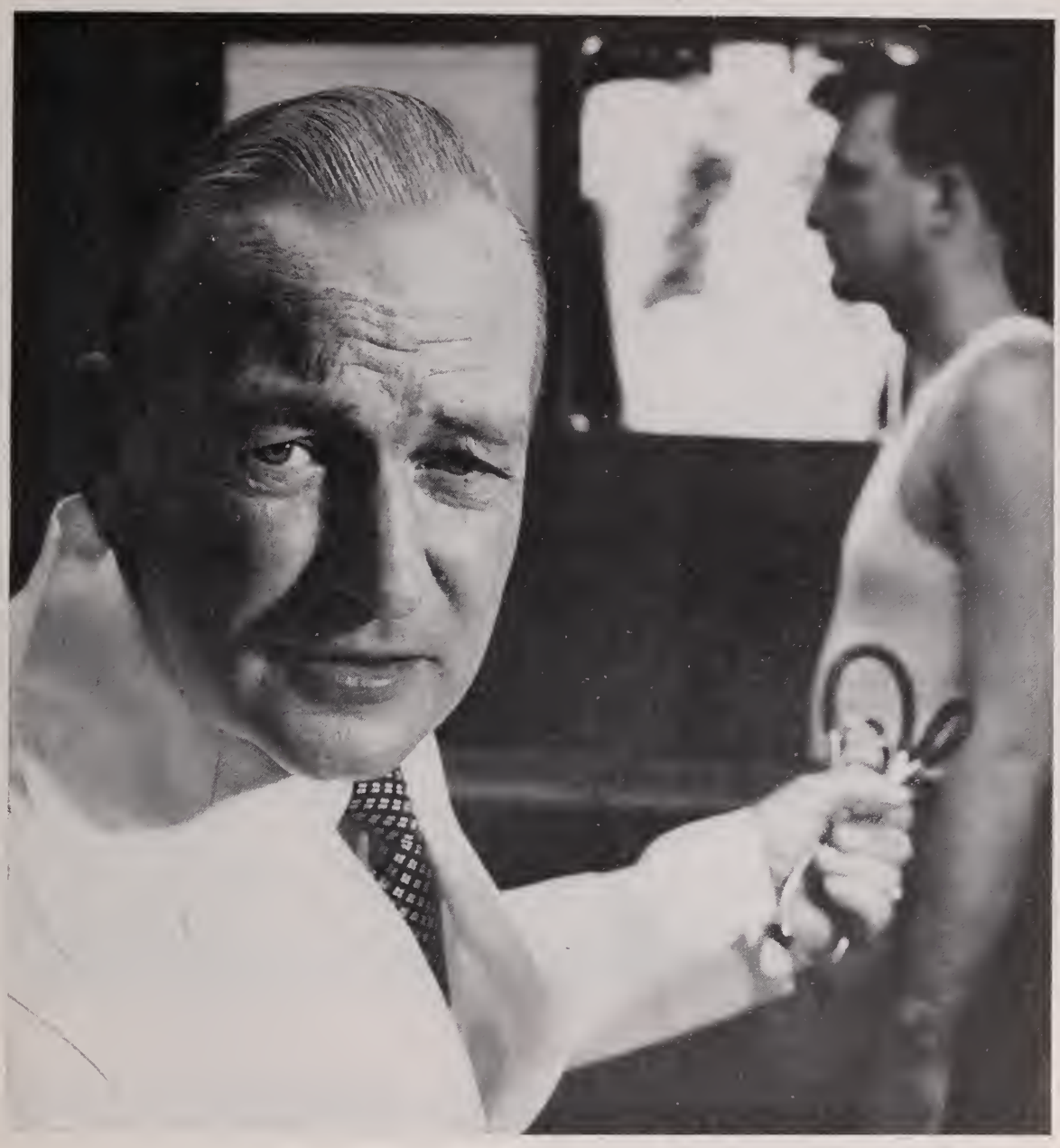
- Lower dosage (⅓ lower dosage than prednisolone)
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New authoritative studies show that KYNEX dosage can be reduced even further than that recommended earlier.[1] Now, clinical evidence has established that a single (0.5 Gm.) tablet maintains therapeutic blood levels extending beyond 24 hours. Still more proof that KYNEX stands alone in sulfa performance—

- Lowest Oral Dose In Sulfa History—0.5 Gm. (1 tablet) daily in the usual patient for maintenance of therapeutic blood levels
- Higher Solubility—effective blood concentrations within an hour or two
- Effective Antibacterial Range—exceptional effectiveness in urinary tract infections
- Convenience—the low dose of 0.5 Gm. (1 tablet) per day offers optimum convenience and acceptance to patients

1. Nichols, R. L. and Finland, M.: *J. Clin. Med.* 49:410, 1957.

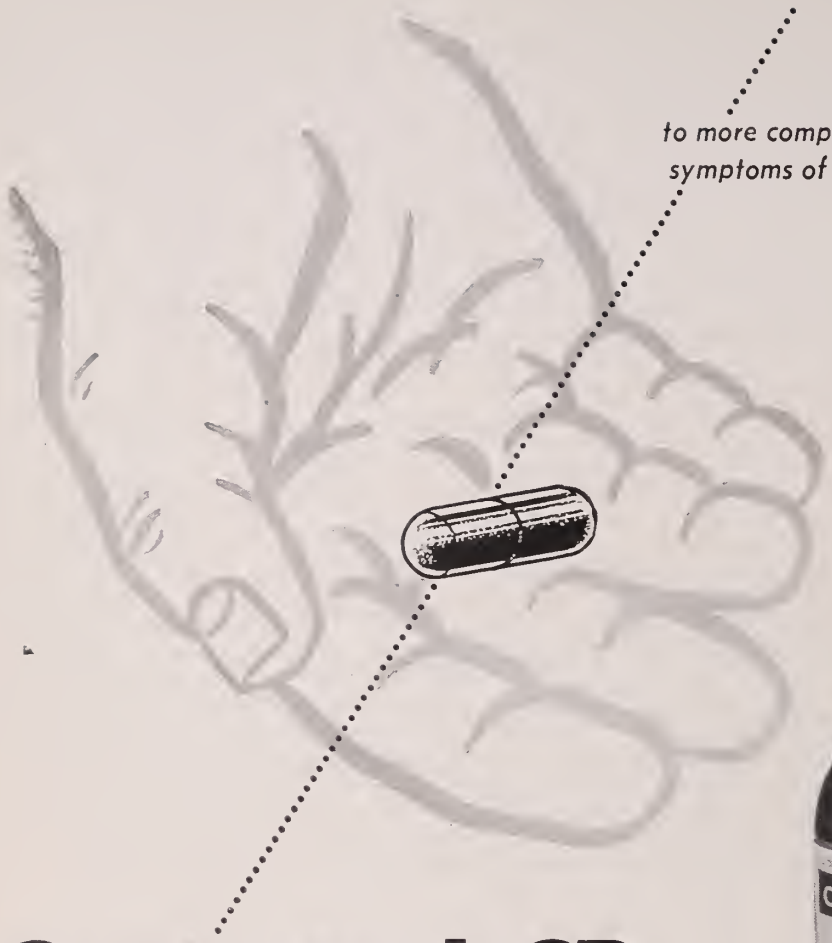


NEW DOSAGE. The recommended adult dose is 1 Gm. (2 tablets or 4 teaspoonfuls of syrup) the first day, followed by 0.5 Gm. (1 tablet or 2 teaspoonfuls of syrup) every day thereafter, or 1 Gm. every other day for mild to moderate infections. In severe infections where prompt, high blood levels are indicated, the initial dose should be 2 Gm. followed by 0.5 Gm. every 24 hours. Dosage in children, according to weight; i.e., a 40 lb. child should receive ¼ of the adult dosage. It is recommended that these dosages not be exceeded.

TABLETS: Each tablet contains 0.5 Gm. (7½ grains) of sulfamethoxypyridazine. Bottles of 24 and 100 tablets.

SYRUP: Each teaspoonful (5 cc.) of caramel-flavored syrup contains 250 mg. of sulfamethoxypyridazine. Bottle of 4 fl. oz.

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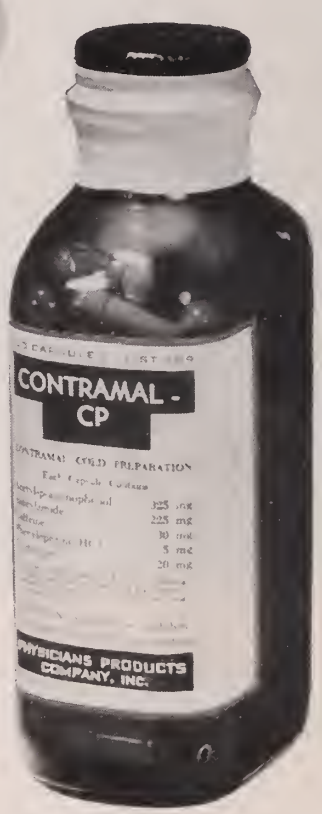


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For your patients suffering from colds, respiratory disorders and allergic states, you will find CONTRAMAL-CP an orally effective DECONGESTANT, ANALGESIC, ANTIPYRETIC and ANTIHISTAMINIC. The inclusion of Tristamine* and Phenylephrine Hydrochloride with the basic CONTRAMAL formula is designed to provide . . . *MORE complete control of the common cold!*

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Salicylamide	225 mg.
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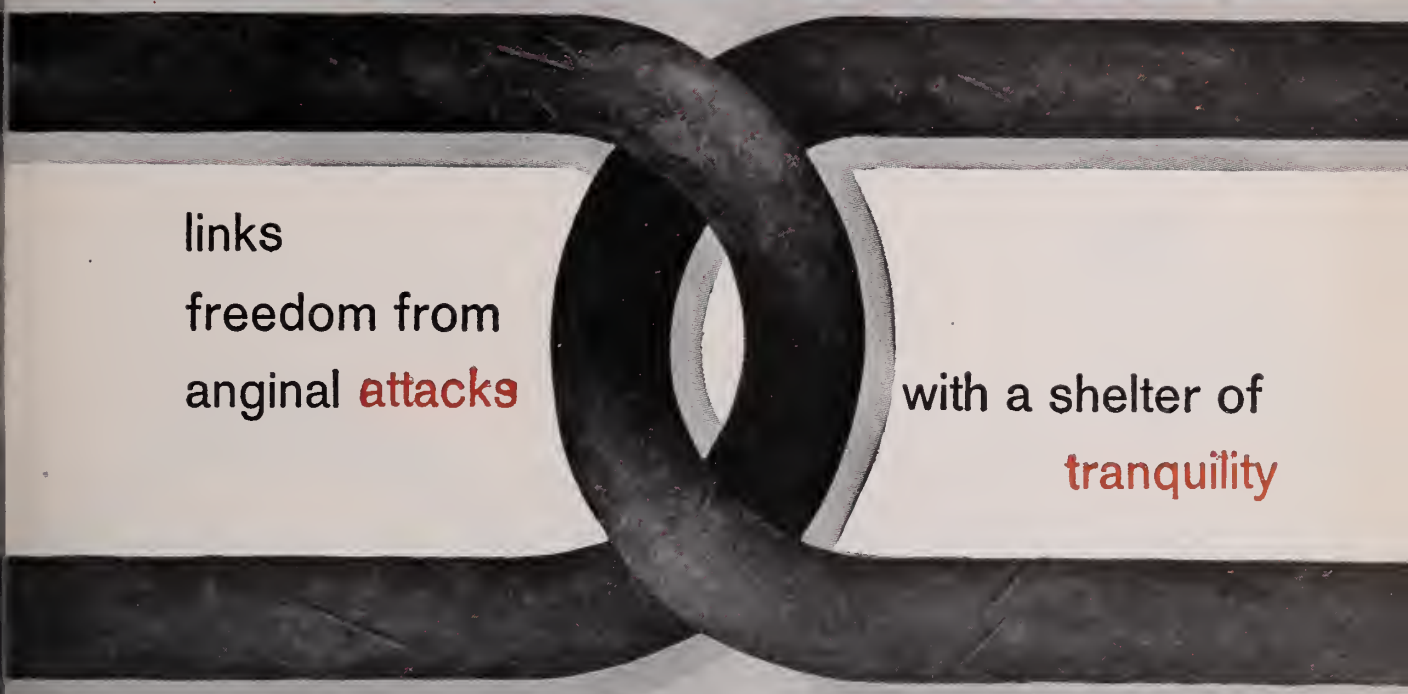
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freedom from
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with a shelter of
tranquility

In pain. Anxious. Fearful. On the road to cardiac invalidism. These are the pathways of angina patients. For fear and pain are inexorably linked in the angina syndrome.

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Dosage and supplied: begin with 1 to 2 yellow CARTRAX "10" tablets (10 mg. PETN plus 10 mg. ATARAX) 3 to 4 times daily. When indicated, this may be increased for more optimal effect by switching to pink CARTRAX "20" tablets (20 mg. PETN plus 10 mg. ATARAX.) For convenience, write "CARTRAX 10" or "CARTRAX 20." In bottles of 100. CARTRAX should be taken 30 to 60 minutes *before* meals, on a continuous dosage schedule. Use PETN preparations with caution in glaucoma.

"Cardiac patients who show significant manifestations of anxiety should receive ataractic treatment as part of the therapeutic approach to the cardiac problem."[1]

1. Waldman, S., and Pelner, L.: Am. Pract. & Digest Treat. *8*:1075 (July) 1957.

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"...especially suitable for out-patient and office use."†



†Ayd, F. J., Jr.: The Treatment of Ambulatory and Hospitalized Psychiatric Patients with Trilafon, presented at Ann. Meet., Am. Psychiat. Assoc., Chicago, Ill., May 13-17, 1957.

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the full-range tranquilizer

EXCEPTIONAL THERAPEUTIC RANGE

. . . dosage range adaptable for tension and anxiety states, ambulatory psychoneurotics, agitated hospitalized psychotics

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- At least five times more potent than earlier phenothiazines

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- From the mildest to the severest nausea and vomiting due to many causes

ADEQUATE SAFETY IN RECOMMENDED DOSAGE RANGES

- Jaundice attributable to the drug alone not reported
- Unusual freedom from significant hypotension
- No agranulocytosis observed
- Mental acuity apparently not dulled

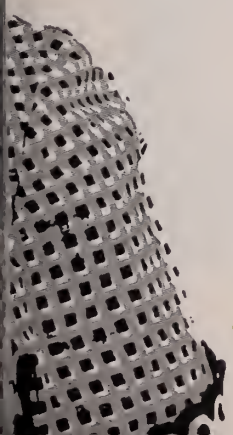
TRILAFON—grey tablets of 2 mg. (black seal), 4 mg. (green seal), 8 mg. (blue seal), bottles of 50 and 500; 16 mg. (red seal), for hospital use, bottle of 500.

Refer to Schering literature for specific information regarding indications, dosage, side effects, precautions and contraindications.

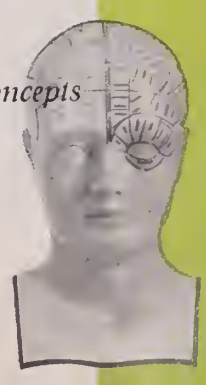
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Scored tablets of 125 and 250 mg. (200,000 and 400,000 units).

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Guest Editorial . . .

Therapeutic Radiology

CLOSE ON THE HEELS of the discovery by Roentgen, in December, 1895, of the remarkable properties of the rays from the evacuated Crookes' tube followed a host of suggestions for the therapeutic use of this new form of energy. It was recognized very early that this radiation was akin to other forms of light, hence it was natural to attempt, unsuccessfully, to employ it to control bacterial growth. Other fields of endeavor were more auspicious and within the first year of its discovery the roentgen ray had been found effective in treatment of a number of skin conditions. In wild abandon this new weapon was then turned on just about every conceivable ill to which man is heir, until by 1910 favorable reports of the effect of x-radiation could be found on nearly all forms of disease.

Time has taken its toll on much of this early enthusiasm fortunately, and today it has become somewhat fashionable to be a therapeutic nihilist. The pendulum has returned from its first wide swing, perhaps too far, so that now the value of radiotherapy is sometimes underestimated, its true worth probably lying somewhat between the two extremes. Radiation therapy is still one of the two known cures for cancer.

There are circumstances in which the radiation therapist is best qualified to render curative aid. The reasons for such a situation are many, depending on the age and general condition of the patient, the type and extent of the lesion, and the availability of other physicians. In this category fall such lesions as keratoses and most skin cancers, the majority of laryngeal cancers, localized lymphoma, cancer of the lip or posterior tongue, malignant tumors of the nasopharynx and tonsil, seminoma of the testicle, cancer of the uterine cervix, medulloblastoma, neuroblastoma, Ewing's tumor, and a number of other conditions. While some of these diseases can be and are successfully attacked surgically, radiation therapy is in most instances the procedure of choice, offering at times a high promise of cure. In some communities the radiologist may be the individual best qualified to deal with malignant disease, a consideration which may determine the treatment method.

At the other end of the spectrum are found unfortunately all too many conditions which experience has shown should not be treated by radiation therapy. It is impossible to list these lesions, but among them might be mentioned carcinoma of the stomach and kidney, and most sarcomas.

Between these two relatively small groups (the "cures" and the "failures") falls

the great bulk of patients. These are the people who may be helped, possibly cured, by radiation therapy judiciously administered. Palliation of incurable malignant disease is very commonly the result of x-radiation. The bone pain produced by metastatic malignancy is often thus alleviated. Dysphagia and dyspnea in incurable cancer of the esophagus and lung may be greatly although temporarily improved. Since it is as much the duty of a physician to alleviate symptoms under hopeless circumstances, this use of radiation deserves especial emphasis. Its great value to the patient lies in his increased comfort, and occasionally the patient who is accepted for palliative treatment may be permanently cured.

A serious note of caution against the indiscriminate use of radiation therapy must be introduced at this point. Since any form of radiation therapy does a certain amount of damage to normal as well as diseased tissues, this method of treatment must not be invoked merely because "there is nothing else to do". Often it is far better to do nothing than to embark on a course of therapy that offers the patient nothing and may even do harm. Many types of malignant disease respond indifferently or not at all to x-radiation, so that radiotherapy in such situations may be worse than useless. Treatment of benign conditions should be undertaken cautiously, as is the case in embarking on any serious medical or surgical procedure. This is especially true today since some misunderstanding and unwarranted fear have arisen in the public's mind, caused in large measure by exaggerated lay reports of the dangers of radiation. It must be emphasized that a qualified radiologist is well equipped to perform such therapy if it seems preferable to other methods.

In summary, radiotherapy has been well established as a great boon to mankind. Malignant disease may be cured and if such is not always possible, a great measure of palliation can be given many patients with a wide variety of fatal illnesses. Certain forms of benign disease in carefully selected instances are well handled by radiation therapy. However, it must be emphasized that radiation therapy is not a panacea and that its benefits may be accompanied by deleterious side effects. Like other serious procedures it should not be invoked unnecessarily or unless there is a real prospect of helping the patient. If one can do no good, most certainly one should do no harm.

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Let's Reminisce!

At the annual meeting of The Medical Society of Virginia in 1878, Dr. Edwards, Treasurer, stated "he was very sorry to announce that the financial affairs of the Society are in a very bad condition; but was happy to say that it was not owing to a want of funds due the Society by Fellows, but to a want of payment of those funds by the members. He further said, that he had already advanced $500 for the Society, without an endorser; but that he could not do so any longer without assistance. If the members would come forward and pay their assessments for 1878-9, which are now due, we would have a balance to report instead of a deficit." The treasurer reported a total in receipts of $636.56 and disbursements in the amount of $994.48. He waived all claim to the ten per cent commission due him on the collection of initiation fees and annual assessments.

Orthopaedic Handicaps in Children

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THE KEYSTONE of medical practice in every community is the general practitioner, and among the many patients he is called on to treat are children with orthopaedic handicaps. It has been said that 90% of these children are first seen by the physician in general practice. When it is realized that many of these children whom the orthopaedist is asked to examine and treat could have been more successfully cared for if the referral had been made at an earlier date, it is most appropriate that this subject be presented at this meeting. If the general practitioner is not cognizant of the diagnosis and treatment of the more common orthopaedic crippling conditions in childhood, he is at a distinct loss and disadvantage in discussing the problem with the parents. Most of these parents, when they first learn that their child has an abnormality, develop an extraordinary fear and apprehension of the worst. If the family physician can calm an emotional or over-anxious state of a mother or father, great good will be done not only for the peace of mind of this parent but also for the disabled child.

THE INCIDENCE OF CHILDREN WITH ORTHOPAEDIC HANDICAPS

The most recent as well as the most complete study of the incidence of handicaps in childhood has been made in two north Georgia counties with a rural and city population of 48,200. It was found that 10% of this population under 21 years of age had some type of physical, mental or emotional handicap, the highest percentage being mental retardation. The incidence of orthopaedic handicaps in this study was 11% of the total number of handicapped children. The accepted figure for orthopaedic handicaps in children is 4 per 1,000 in a population of all ages, which is approximately what was found in this Georgia study. In the State of Virginia, with approximately 4,000,000 people, there should be approximately 16,000 children with such handicaps. In all state crippled children's programs today approximately 50% of the total have musculo-skeletal or orthopaedic handicaps. This percentage is higher in states where programs of speech, hearing and other so called invisible handicaps have not been well developed.

ETIOLOGICAL FACTORS

In order to understand crippling conditions and what can be done to decrease their incidence, there must be a thorough knowledge of causation. The four major groupings of known etiology of orthopaedic conditions are: (1) congenital, (2) developmental, (3) infectious, and (4) traumatic. An orthopaedic crippling condition in childhood becomes apparent in over one-half of the cases before the age of six*. As infantile paralysis becomes less in frequency, this age will probably become lower, because of the relatively increasing numbers of congenital malformations seen at earlier ages. Children with bone tuberculosis and osteomyelitis, who, thirty years ago, constituted approximately one-half of the patients in crippled children's hospitals, are now relatively few; this is due to the more general use of antibiotics and better programs for the control of tuberculosis. In 806 new patients examined at the Alfred I. duPont Institute in 1955 and 1956, there were six new cases of tuberculosis and one new case of osteomyelitis, a small number compared to figures of the nineteen twenties. During this same period, 47% of the new cases in the Out-Patient Department and 62% of the hospital admissions were congenital malformations. Of the new patients the incidence of developmental changes, such as coxa plana, idiopathic scoliosis, knock knees, and flat feet, was 37.5% and of traumatic conditions, 4.8%.

DIAGNOSTIC PROBLEMS

Visible handicaps as a rule do not constitute a problem in diagnosis. It is the non-visible handicap which is difficult to diagnose, such as the patient complaining of pain in the back, hip or knee, or the case with bone pathology in an extremity without external evidences of abnormality.

There are six major groups of diagnostic problems as follows: (1) affections of the spine, (2) affec-

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Presented at a meeting of the Virginia Academy of General Practice, Roanoke, May 25, 1957.

* The average age of approximately 3,500 crippled children examined at the Alfred I. duPont Institute from 1940 to 1950 was 5.4 years.

tions of the hip, (3) swelling of the knee, (4) neuromuscular disorders, (5) unusual general affections of the skeleton, and (6) bone tumors. Because the latter two are relatively uncommon, they will not be discussed.

Since the first statement of the parent to the physician about the child is usually one such as: "his leg hurts", "her hip catches", or "his back aches", it is thought that the grouping of the handicaps on a regional basis might be clearer than a grouping on a basis of pathology. The neuromuscular disorder cannot be grouped in this way and will be discussed as a separate entity.

A. The Spine: Sharp pain referable to the back, unassociated directly with a fall or a blow, is usually an indication of an infectious process such as tuberculosis or osteomyelitis. The first symptoms of a tuberculosis of the spine may be aching and a feeling of fatigue and weakness through the back. At times a slight kyphosis or prominence of one or more of the spinous processes may be the first noticeable evidence. The condition is always associated with spasm of the spinal muscles and pain upon attempting to bend in any direction. The diagnosis can be definitely made by x-ray. In tuberculosis of the dorsal and lumbar spines, x-ray evidence of an abscess and destruction of the bodies of the vertebrae are usually found. The first treatment should be immediate rest and administration of the appropriate antibiotics, such as streptomycin and an isonicotinic acid preparation. Later an operative stabilization of the spine to hasten the healing process may be indicated. If treatment is started early, the prognosis is good for a healed tuberculous lesion.

The diagnostic problem associated with an osteomyelitis of the spine is usually more difficult. It is to be differentiated always from tuberculosis. The onset is more rapid and the symptomatology more acute. A careful study of the x-ray will usually show less bone destruction and more bone production than in tuberculosis. The treatment again is rest, appropriate antibiotic therapy and immobilization. An operative fusion of the involved vertebrae as in tuberculosis is usually not indicated, as the vertebrae will often fuse themselves satisfactorily.

Around the age of puberty in both boys and girls, there may develop a dorso-lumbar round back, or kyphosis. It is accompanied sometimes with pain, unusual fatigue, and weakness. The condition may be progressive and x-rays will show irregularities about the epiphyses of several of the vertebrae over an area corresponding to the kyphosis; from this x-ray appearance a diagnosis of vertebral epiphysitis can be made. These conditions are developmental in character; the cause is unknown. Sometimes the condition may extend over a considerable area of the dorsal and upper lumbar spines but, on the other hand, may be localized to three or four vertebrae. Sometimes stretching and support of the back with a brace for a matter of several months may be indicated if the discomfort and deformity are pronounced. However, most cases are treated only by rest and postural exercises.

A progressive lateral curvature of the spine very often develops around the age of puberty, much more common in girls than boys. The cause is unknown; hence it is called idiopathic scoliosis. If untreated, it may progress to a severe deformity and distortion of the thorax. If the curvature rapidly increases and there are prominences of one shoulder, one hip and one side of the posterior rib cage, an operative stabilization of the spine may be indicated. This spinal fusion may either follow or precede the use of corrective plaster jackets to decrease the curvature. The results of fusion operations are usually very satisfactory, if performed at the appropriate time. A scoliosis is sometimes found in infantile paralysis. If this becomes progressively worse, an operative fusion of the spine is definitely indicated.

A third common condition of the spine is a congenital defect in the laminal arches called spina bifida. It is more frequently observed in the lumbar area, and there is usually an associated meningocele or myelomeningocele. During the first few months of life, a hydrocephalus, or enlargement of the head, may develop. A partial or complete paralysis of the lower extremities with anesthesia is nearly always present with incontinence of bowels and bladder. These conditions are relatively frequent in crippled children's hospitals and are found in about 1 in 2,000 live births. The orthopaedic care is one of rehabilitation, bracing, and instruction in crutch walking. Occasionally surgery may be indicated to correct a deformity of one or more joints.

Sometimes the head is twisted to one side due to a contracture of a sternocleidomastoid muscle. This condition is spoken of as torticollis, or wry neck; it is usually congenital in origin. In the infant of a few months of age, stretching of the neck and the head in the opposite direction is indicated, while in the older child a myotomy of the contracted muscle, followed by corrective physical therapy, is the treatment of choice. The results are nearly always excellent.

B. The Hip: There are many interesting diag-

nostic problems in the hip. In the young infant starting to walk there may be noted a waddling gait and a limp, or a waddling gait alone, indicative of a congenital dislocation of one or both hips. All infants should be carefully examined for hip dislocation. If upon flexing the hips and knees, with the child in a supine position, one knee is lower than the other, if one or both hips cannot be abducted normally, if there is an increase in the number and depth of the folds of the thigh, and if one leg is shorter than the other, a congenital dislocation of one hip should be suspected. It is easily diagnosed by x-ray. The reduction and maintaining of a normal relationship between the head of the femur and acetabulum in a congenital dislocation of the hip are usually relatively simple in the early years, i.e., before three years of age, but with increasing age it is progressively more difficult to obtain a good result. The treatment of the infant before walking is the application of an abduction splint; after approximately one year of age the treatment should be reduction by gentle manipulation and immobilization in plaster, preferably in the "frog leg" position for a period of nine months. If closed reduction is unsuccessful, an open reduction should be performed. The author's experiences have been excellent in those children who have been treated early. In the older case it may not be possible to replace the hip in the acetabulum and a reconstruction operation may be necessary.

A second common condition in the hip, more common in boys than in girls, is coxa plana, or Legg-Perthes Disease. This has sometimes been called "a flat-headed femur." The first evidences of the condition usually appear around the age of 3 to 5 years; a slight pain through the hip or on the inside of the thigh to the knee with a limp may be present. Prevention of weight bearing through rest in bed, special splints or a shoulder-hip sling and crutches is the treatment of choice; this should be continued until x-ray evidence of reformation of the head is present. This may take from two to three years; the results are generally satisfactory.

Around the age of puberty, particularly in boys, a slipping of the upper femoral epiphysis may occur. This may be associated with a fall, but very often occurs without trauma. It more often appears in the so called glandular type or overweight child with underdeveloped sexual characteristics (Fröhlich's Syndrome). The first evidences are a limp, pain in the hip or in the knee, a gradual stiffening, and a fixed flexion-external rotation deformity. It can be very easily diagnosed by x-rays, which should be taken in the lateral and antero-posterior views. Weight bearing should be discontinued immediately, in order to prevent further slipping. If displacement is moderate or severe, a nailing, or pinning, of the epiphysis to the neck of the femur after an open or closed reduction is the best treatment; otherwise complete rest for 12 to 14 weeks is indicated, preferably in plaster, followed by a non-weight bearing brace for approximately six months. The results are good if adequate treatment is started early.

A low-grade synovitis or tuberculosis of the hip is unusual but is occasionally observed. Non-tuberculous synovitis usually subsides with rest which should be obtained by traction or a plaster cast. Indefinite pain through a hip, radiating down the inside of the thigh to the knee, a limp, muscle spasm, and limitation of motion may be indicative of an early tuberculosis. The early case cannot always be diagnosed by x-ray. A joint biopsy or an aspiration for culture is indicated. Twenty-five per cent (25%) of all tuberculous joints are of the hip. With the new antibiotics, isonicotinic acid preparations and streptomycin, a great many of these hips can be treated satisfactorily without surgery. Heretofore, with an absolute diagnosis of tuberculosis of the hip, an extra-articular arthrodesis has been the treatment of choice. The results from these operations are usually good, but the hip remains permanently stiff.

C. The Knee: The most common conditions about the knee are knock knee and bow leg. These, however, are not diagnostic problems and were much more often seen in the past, associated with rickets. The only serious cases observed in the Alfred I. duPont Institute in recent years have been those due to vitamin D resistant rickets observed between six and ten years of age. These can be very easily diagnosed by x-ray. As a rule, osteotomies are necessary to correct the deformities.

Another deformity sometimes seen is an internal torsion of the tibia resulting in the leg and foot turning in on walking. This may be marked enough to require tibial rotation osteotomy. Occasionally, but not very often, loose bodies and popliteal and external semilunar cartilage cysts are present in and about the knee joint. If a loose body is definitely demonstrable by x-ray, it should be removed. All cysts should be excised.

The most significant diagnostic problem of the knee is the chronic, recurrent swelling with increased joint fluid. When with proper rest, which may be in a plaster cast, the swelling does not subside, a biopsy is indicated. Non-tuberculous synovitis of

unknown etiology, synovial tuberculosis, and a pigmented villonodular synovitis must be considered in the diagnosis. In any one of these three conditions, a synovectomy may be indicated.

D. The Foot: The most common of all conditions seen in crippled children's clinics are clubfoot and flatfoot. Clubfeet constitute approximately 25% of all congenital orthopaedic conditions and are the most common congenital conditions observed in orthopaedic clinics. Clubfoot occurs in 1 in 500 live births. In some clinics the incidence is as high as 50% of the congenital malformations; 6.7% of all children seen in state clinics in 1951 had clubfeet. A clubfoot should be treated as soon as recognized; this should include manipulation, corrective casts, special shoes and, at times, special braces. The results are very satisfactory with early treatment. The older the patient is, the more unsatisfactory is the end result.

Mothers become quite worried about flatfeet in their young growing children. These, as a rule, are not problems unless congenital bony changes are present, which conditions are extremely rare. Special orthopaedic shoes with Thomas heels, elevated 1/4" on the inside, will very often take care of a mildly pronated, flexible flatfoot. Because of the parents' concern, it is necessary for the physician always to explain carefully the situation, assuring the parents that their child is not going to have deformed feet.

The flail foot of polio, or other neurological disease, is a special problem and usually requires bracing and stabilization of subastragalar and midtarsal joints. The deformed foot showing dorsal contraction of the toes with an increase in the height of the long arch (pes cavus) and with no evident etiology, is a condition called idiopathic clawfoot; it is rather rare, but is extremely serious and very often requires a bony operation for correction of the deformity. No bony operation should be done as a rule on feet before ten years of age because of subsequent, unpredictable growth changes causing deformities. Deformity can, as a rule, be prevented with braces during the periods of growth.

E. Upper Extremities: The problems of the upper extremity are not as numerous as those of the lower extremity. In infantile paralysis the shoulder may be flail and drooped, requiring a brace or fusion. Muscle and tendon transplantations sometimes are done about the polio elbow to give better function, as is also true with the wrist. A flexed wrist, seen often in polio and sometimes in cerebral palsy, can be tremendously improved by a bony stabilization in about 15 degrees of dorsiflexion. The second most common congenital condition to clubfeet is dactylism, or congenital arbnormalities of the fingers as polydactlylism, syndactlylism and adactylism. Special plastic surgery operations may be indicated for these conditions.

F. Neuromuscular Disorders: The muscular disorders of cerebral palsy and infantile paralysis, next to foot disorders, are the most common group of conditions observed in children's orthopaedic clinics It is most important for the cerebral palsy child to be referred to a special clinic where there are physicians and therapists especially trained in the diagnosis and treatment of these problems. Tremendous progress has been made in recent years in the care of cerebral palsy children, thanks to the efforts of the Children's Bureau, the National Society for Crippled Children and Adults and United Cerebral Palsy. The cerebral palsy patient was once called the "forgotten crippled child" but this is not true in the last decade. The "forgotten child" today, some say, is the mentally retarded child.

Polio children have been extremely numerous in the past; they should be less so in the future with the more widespread use of the Salk vaccine. The treatment of each case depends upon the extent of paralysis, the deformities, if present, and the instability of the joints of the extremities involved. Many operations on muscles, transplanting and lengthening of tendons, and stabilization of joints are done for infantile paralysis. These are performed to allow a patient to walk without a brace or to enable flail joints to function more effectively. There are very few paralytic conditions in infantile paralysis which cannot be helped with braces and, fortunately, a satisfactory brace is now available for almost every type of joint disability due to muscle weakness.

Obstetrical palsy, involving one shoulder and arm, which is usually apparent shortly after birth, and amyotonia congenita, apparent in the first weeks of life, are both conditions for which the general practitioner should watch and refer to the orthopaedic surgeon. For the obstetrical palsy, an abduction brace with physiotherapy is indicated; for the amyotonia, no special treatment is indicated except physiotherapy.

Concerning congenital malformations, which are increasing in incidence in orthopaedic clinics, the author believes that not sufficient attention is being given to prevention. There is strong experimental

and clinical evidence to show that nutritional deficiencies and infections in pregnancy may be major factors. There are many statistical studies to show that fewer congenital malformations are found in the young mother than in the older mother, a very significant factor to be considered in planning a family. The first trimester of pregnancy, during which the fetus is being formed, represents the critical period. If during this early period the nutritional requirements of the growing and multiplying cells are not met, or an infection of these cells occurs, a malformation may follow. It is most important for the family physician to intelligently talk to women and prospective mothers concerning (1) the importance of maintaining good health, good living habits, and a balanced diet before and during pregnancy, particularly in the first trimester and more especially in the first four weeks of the first trimester, (2) the part infection may play, particularly in early pregnancy, and (3) the preferable time for and probably the only preventive we have today to having families. This type of instruction is the best decrease the enormity of the problem and, certainly, much can be done by general practitioners.

The author believes very strongly that the care and treatment of the orthopaedic crippled child can be materially improved with closer cooperation between the general practitioner and the orthopaedist. Early recognition, intelligent interpretation of handicapping conditions to the parents and early referral to the specialist cannot help but lead to a higher percentage of good results. The general practitioner must always consider himself an active member of the rehabilitation team for the orthopaedically handicapped child. He has a part to play before referral to the specialist and a greater part even after orthopaedic treatment, when the child has been returned to the home. For it is in the home, the family physician talks to the parents and sees that instructions of the specialist are carried out leading to the best possible restoration of this handicapped child to normal living.

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Methyl Alcohol

Blood

To 2 ml. of blood, add 2 ml. of trichloracetic acid (20%), shake to precipitate the proteins. Filter and collect filtrate.

To 1 ml. of filtrate in a test tube add 4 drops of potassium permanganate reagent. Wait 2 minutes and decolorize excess potassium permanganate with a *small* pinch (size of a pin head) of sodium bisulfite. Add a pinch (size of a match head) of chromotropic acid and mix into solution. Carefully underlay with 2 ml. of sulfuric acid (by allowing it to run down the inclined side of the test tube.)

Purple ring at interface indicates the presence of methyl alcohol; test is also positive for formaldehyde.

Large amounts of ethyl alcohol may sometimes produce a brown ring, but this is distinctly very different from the deep purple of methyl alcohol.

Potassium permanganate reagent is made as follows: 3 gm. potassium permanganate plus 15 ml. of ortho phosphoric acid diluted to 100 ml. with water.

Premenstrual Tension

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PREMENSTRUAL TENSION is a fairly common, recently much publicized, rather ill-defined syndrome occurring from two days to two weeks premenstrually. The reported incidence varies from very high to very low and the borderline between the normal and abnormal is vague. In this condition some of the following signs and symptoms reportedly occur in varying combinations and degrees of severity: nervous tension, irritability, instability, temper tantrums, "crying jags," depression, mental confusion, anxiety, insomnia, vertigo, headache, visual disturbance, "arthritic pains," backache, mastalgia, fullness of the breasts, nasal congestion, coughing, sneezing, bloating of the abdomen, nausea, vomiting, abdominal pain, diarrhea and/or constipation, edema of the extremities, increased weight, increased thirst, increased appetite, decreased urinary output, cystalgia, ulcerative stomatitis, hypoglycemia, trembling of the hands, pruritus vulvae, increased or decreased libido, and even transient flat feet! Aggravation of other conditions, such as acne and other skin lesions, and epilepsy, may occur during the premenstruum.

These disturbances are not only distressing to the patient, but may be so to her family, friends, and associates. They may be distressing also to society. It is known that suicides and crimes of violence are more common during the premenstruum. One study of female prison inmates showed that in 62% of the cases the crimes of violence had been committed in the premenstrual week. Another study showed that 84% of such crimes committed by women occurred during or immediately before the menses. It is reported that most of the motor vehicle mishaps of women drivers have occurred under premenstrual tension. Inmates of mental institutions are more difficult to manage premenstrually. In industry the disturbance is a cause of absenteeism and inefficiency. It is predicted that premenstrual tension may have a legal impact in both civil and criminal cases as a condition of temporary insanity or other mental disability.

The condition is a cause of much domestic and marital discord. One patient had an uncontrollable desire to throw her children, to whom she was devoted, out of the window; another would threaten her husband with a knife at this time each month. Women with premenstrual tension have been described as "part-time witches" and further classified as "grade-one, grade-two, and grade-three witches, the latter, especially, to be avoided on their bad days."

Typically the symptoms tend to reach their peak just before the flow and to subside abruptly with its onset. Very exceptionally the symptoms occur during the flow or postmenstrually.

ETIOLOGY

Frank, who is generally credited with being the first (1931) to describe this condition, attributed it to hyperestrinism due to a high kidney threshold for estrogen excretion. It has been suggested that an excess of progesterone may be a factor in the condition; yet others have considered the condition due to a deficiency or absence of the corpus luteum or to an abnormally high estrogen/progesterone ratio; and others even disagree with the concept that there is any estrogen-progesterone imbalance.

A disturbed estrogen-androgen balance has also been postulated as a causative factor.

Another suggested theory is that an elevated estrogen level during the second half of the cycle suppresses production of the pituitary growth hormone; this hormone is thought to be a diabetogenic substance and to stimulate production of the hyperglycemic glycogenolytic factor by the alpha cells of the pancreatic islets; thus hypoglycemia, causing at least some of the symptoms of premenstrual tension, is produced. However, one writer feels that it is "debatable whether the impaired glucose tolerance and hypoglycemia of his patients contribute materially to the syndrome."

Despite all the theories of sex hormone disturbance the condition occurs in apparently normally ovulating women; the endometrium has been shown to be in an apparent normal progestional phase; and hormone levels have been reported normal. Where changes in vaginal smears, endometrial biopsies, hormonal levels, and basal temperature curves have occurred, they have not been constant or permanent;

From the Department of Gynecology at the Medical College of Virginia.

they have differed from one cycle to another and from one patient to another.

Some attribute the condition to abnormal sensitivity of the tissues to hormone influence rather than to quantitative or qualitative disturbance in the hormones themselves.

It has been suggested that psychic trauma is a factor which results either in excess estrogen secretion and/or progesterone production or in increased sensitivity to these hormones. The psychic effect may be mediated through the hypothalmic-pituitary axis or through the autonomic nervous system. Others have stated that there is no evidence to substantiate the theory of psychogenic etiology of premenstrual tension. It is obvious that emotional disturbances are a part of this condition, but it is not clear which are cause and which are effect. Some statements regarding psychogenesis seem incomprehensible. One such is: "The causation of this condition has been explained psychologically on the basis of unconscious awareness of pregnancy with a regression to an infantile level where the libido is turned inwardly."

Another suggested cause is a menstrual toxin. Smith feels strongly that premenstrual tension is due to the absorption of irritative catabolites from a poorly-sustained endometrium. He points out that women who have normal ovaries and have had the uterus removed are singularly free of symptoms similar to those of premenstrual tension. Furthermore in castrated women with intact uteri the administration of sufficient estrogen to induce endometrial bleeding may result in complaints similar to those of premenstrual tension. He states that the disintegration of endometrium and the opening of blood vessels at menstruation is indicative per se of the presence of a noxious substance. He feels that even if this theory is the correct one the reason that the endometrium is poorly sustained still needs to be discussed.

Vitamin deficiencies have also been indicted. Biskind attributes premenstrual tension to the inability of the liver to inactivate excess estrogens in the presence of a deficiency in vitamin B complex.

Some have theorized that abnormal sodium and water retention in the tissues premenstrually is the direct cause of the symptoms, and that such retention results from increased sex steroids. In addition to the sex hormones, the activity of the antidiuretic hormone of the posterior hypophysis has been included as a possible factor in the water retention.

It has been demonstrated that menstrual edema parallels cyclic ovarian changes, especially progesterone elaboration. It is well known that there is a weight increase occurring premenstrually in normal women. This increase is said to be greater (reportedly up to 16 pounds) in those who suffer with premenstrual tension. Furthermore there is diuresis during menstruation and this excess urinary excretion is greater in women with the syndrome. However others have found "no correlation between weight gain (water retention) and the incidence of the syndrome."

Thus it is seen that the exact etiology of premenstrual tension remains to be determined. It is probable that there are numerous causes and that, even in the same patient, many and variable factors may be involved.

TREATMENT

As would be expected, the treatment of a syndrome with such protean manifestations and unestablished cause varies widely. Some patients will require no treatment; for those that do the treatment should be individualized, and altered when need be.

The treatment may vary according to the theory subscribed to by the therapist, or it may be empirical and/or symptomatic. It has included the following methods singly and in combinations.

Hormone Therapy in this condition is not uniform. Some physicians have used progesterone (Israel, Smith), for example 25 mg. intramuscularly on alternate days during the second half of the cycle, or anhydrohydroxyprogesterone 50 mg. orally daily between the sixteenth and twenty-sixth days of the cycle. An objection to this therapy is its cost.

Androgens have been advocated, e.g., 5 mg. of methyltestosterone orally daily for 60 days. It is suggested that the beneficial effect of this treatment is due in part to an anabolic effect on the endometrium (Smith).

Chorionic gonadotrophin has been employed by some but there are objections to the use of this hormone. Some authors have advocated "supportive estrogen therapy." Others have used thyroid substance.

Some of these hormones have also been used in combinations or in sequences.

Dietary Measures may be of value. Salt and water intake is restricted to decrease retention of these substances. Vitamin B complex is prescribed to aid the liver in inactivating estrogens. A low carbohydrate, high protein, fat, and vitamin diet has been advocated.

Most commonly therapy aims at dehydration. In addition to restriction of the salt and water intake (vide supra) various diuretics have been prescribed. Of these, perhaps the most frequently used is ammonium chloride (Greenhill and Freed) in doses of one to two grams four times daily for one to two weeks premenstrually and sometimes extending a day or two into the period of flow. Saline catharsis has been recommended, but it would seem that this treatment might be worse than the disease.

As many of these patients are emotionally disturbed psychotherapy may be helpful. In psychotic or border-line psychotic patients psychiatric help is indicated. Physical exercise may be of value. In some cases the use of sedatives or tranquilizers has proven valuable. Pennington in a recent study found meprobamate, taken only when the symptoms presented themselves, an ideal drug for repeated use in premenstrual tension.

Other drugs which have been used include analgesics and antihistamines.

Radical therapy, seldom indicated if at all, and then only under very unusual circumstances, is surgical or irradiation castration. Pregnancy, of course, is a cure for the duration of the pregnancy. Indeed it might be said that premenstrual tension is in a sense a penalty for not being pregnant.

SUMMARY

The term premenstrual tension is applied to a frequent, ill-defined syndrome of many subjective disturbances and few objective findings occurring, as its name indicates, before menstruation. Its etiology is obscure and is the subject of some study and much speculation.

Treatment includes dietary measures, hormones, diuretics, sedatives, other drugs of various sorts, and psychotherapy. These meet with inconstant success.

Many articles on this subject appear in the literature and one wishing to be further confused may study them directly.

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"March of Medicine"

The work of American physicians in remote regions of the world where native populations are largely dependent upon our doctors and medicine for their health and well-being is the television story to be aired coast-to-coast January 23. Entitled "MD International," the hour-long show will be presented at 10 p.m. EST over the full NBC-TV network both in color and black and white. This is part of a joint American Medical Association and Smith, Kline & French Laboratories project to inform the American public of people-to-people activities in the health profession for the promotion of better international understanding.

The telecast reports on doctors' activities in thoracic and general surgery, orthopedics, ophthalmology and general medicine in such far-flung areas as Korea, Hong Kong, Burma, Sarawak, Nepal, India, Lebanon and Ethiopia. A special March of Medicine team traveled more than 34,000 miles to film these doctors in their unofficial roles as America's "medical diplomats."

Two world-wide figures—Charles Malik, foreign minister of Lebanon, and Emperor Haile Selassie of Ethiopia—will express their peoples' gratitude for the American medical work being carried on in their countries.

Routine Postoperative Use of Intravenous Tetracycline

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WARD et al[1] in analyzing 1000 gynecological operations promulgated the "Rule of Three". This rule implies that in a group of similar cases, one may expect a 30% incidence of morbidity, 3% of complications and 0.3% of mortality. We are ever striving to approach the "Rule of One" or "Two" in all our surgery and have available an ever-increasing number of expedients toward that end.

More and more popular is becoming the routine postoperative use of antibiotics. A major agent along this line is tetracycline hydrochloride. Perhaps the use of this drug parenterally is not more widespread because of our adverse experiences with an earlier broad-spectrum antibiotic, chlortetracycline. This latter agent when given intravenously in concentrated solution frequently causes an intense local phlebitis.

With tetracycline this need not be the experience. Since most patients during major surgery or in the immediate postoperative period receive intravenous fluids, it is quite convenient to add 500 mg. of tetracycline hydrochloride to the infusion. Tetracycline may be added to almost any standard solution for parenteral use. Thus the patient is spared unnecessary additional injections as well as possible phlebitis. Moreover, since we by-pass the vagaries of the gastrointestinal tract, the patient is certain to receive the full benefit of this agent.

Some surgeons feel that the use of prophylactic antibiotics or chemotherapeutic agents after major surgery betrays a lack of confidence in their techniques. What is so wrong about incorporating this practice into one's technique? In spite of the best surgical preparation and the most skillful tissue-handling, some incidence of sepsis is bound to arise. To withhold from our patients even the slightest tinge of additional safety is indefensible.

MATERIAL

The present study involves 75 consecutive patients on whom were performed 79 major gynecological operations involving peritoneotomy.

In 39 instances (Group A), in the immediate postoperative period each patient received the routine 1000 cc. intravenous infusion, to which was added 500 mg. of tetracycline hydrochloride.*

In the other 40 (Group B), no prophylactic intravenous antibiotic or chemotherapeutic agents were used. (A diligent attempt was made to avoid case-selection here but the reader might well suspect that in potentially infected cases, there would be a strong inclination to put them into Group A. Thus the morbidity figures would tend to be weighted in favor of Group B.)

In the entire series were 13 abdominal hysterectomies, 10 vaginal hysterectomies, 17 cesarean sections, and 15 pelvic laparotomies without appendectomy. In 24 more laparotomies (without hysterectomy) primary or incidental appendectomy was performed. Accompanying the vaginal hysterectomies were 2 anterior and 9 posterior colpoplasties. The indications for the cesarean sections were as follows:

Fetopelvic disproportion	7 cases
Previous section	5 cases
Placenta previa	4 cases
Abruptio placentae	1 case

The hysterectomies were done for indications which included prolapse, persistent bleeding, chronic cervicitis, adenomyosis, postpartal broad ligament abscess, pelvic inflammatory disease, and myomata. Other pelvic surgery was done for adhesions, prolapse, endometriosis, myomata, twisted adnexa, ruptured tubal pregnancy, amenorrhea, intractable dysmenorrhea, and appendicitis. The surgery included hysteropexy, oophoropexy, adnexectomy, presacral neurectomy, ovarian resection, adhesiolysis, and hysterosalpingostomy.

In five instances, laparotomy was done during the first trimester of pregnancy:

(1) Adnexectomy (for torsion)—benign cystic teratoma,
(2) Adhesiolysis and removal of ovarian cystoma,
(3) Appendectomy—subacute appendicitis,
(4) Myomectomy,

* The tetracyline hydrochloride employed in all these cases was Achromycin.

(5) Exploratory laparotomy and appendectomy. In all instances, progesterone injections were given postoperatively. Four patients carried to term and the fifth is at present enjoying an uneventful gestation.

There were 14 postpartal (Pomeroy) sterilizations done, usually for grand multiparity and socio-economic indications. Five fell in Group A (4 had incidental appendectomy) and 9 fell in Group B (8 with incidental appendectomy). There was no morbidity in either group. Cesarean section was never accompanied by appendectomy, although incidental appendectomy following cesarean section is not intrinsically a reprehensible practice.[2]

RESULTS

In Group A (the tetracycline group), 8 out of 39 cases were morbid (20.5%).*

In Group B (the control group), 11 out of 40 cases were morbid (27.5%).

Table I gives the breakdown as to the types of cases.

In Group A were 4 cases potentially septic in the preoperative period:

(1) Acute appendicitis,
(2) E. coli pyosalpinx,
(3) and (4) Cesarean sections following trial of labor with ruptured membranes.

Case #2 received additional antibacterial agents. None were morbid. In Group B were 4 such cases:

(1) Acute appendicitis,
(2) Subacute appendicitis,
(3) Cesarean section following trial of labor with ruptured membranes,
(4) Broad ligament abscess.

Cases 3 and 4 in this group received antibacterial therapy. Both were morbid.

In Group A were 12 instances of the use of antibacterial agents in addition to the tetracycline infusion. Seven of these were morbid. Of the remaining 27 who received no additional therapy, 2 were morbid. In Group B were 15 instances of the use of such drugs with 11 morbid cases. Of the remaining 25 there was no morbidity. Obvious morbidity or signs or symptoms of incipient infection dictated the use of these additional agents in the postoperative period in both groups.

COMPLICATIONS

Of the 19 instances of morbidity in the whole series, 7 were from urinary tract infection, and one was from a cuff abscess (following a Heaney vaginal hysterectomy).

Four patients in Group A (3 following cesarean section) developed adynamic ileus. Two required nasogastric suction. In Group B there were 2 instances of abdominal distention and one case of phlebitis of the antecubital vein following an infusion. Temporary oliguria and azotemia developed in the Group A patient who underwent a cesarean section for abruptio placentae associated with toxemia. No phlebitis occurred following a tetracycline infusion.

SUMMARY AND CONCLUSIONS

1. Routine tetracycline infusions following major gynecological and obstetrical surgery were employed in 39 of 79 cases.
2. The incidence of morbidity in this group was 20.5%, while in the control group of 40 cases, it was 27.5%. The Standard Error of the treated group is 6.46. Thus, though the differ-

* Morbidity is defined as one or more oral temperature readings of 100.4° F. or higher during any two 24 hour periods exclusive of the first 24 hours after operation or delivery.

Table I

	Group A		Group B		Totals	
	Morbid	Non-morbid	Morbid	Non-morbid	Morbid	Non-morbid
Cesarean Section	1	9	3	8	4	17
Abdominal Hysterectomy	1	7	2	6	3	13
Vaginal Hysterectomy	3	5	4	5	7	10
Appendectomy without Hysterectomy	0	7	1	17	1	24
Other Laparotomies	3	11	1	4	4	15
TOTALS	8	39	11	40	..	..

ence in the groups is not significant, it is suggestive.

3. No adverse effects from the tetracycline infusions were noted.
4. There were no deaths in this series of cases.
5. The routine use of 500 mg. tetracycline hydrochloride in postoperative infusions effectively lowers morbidity and at the same time is safe, convenient, and reliable.

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Salk Vaccine Shortage Is Over

In a recent letter to A.M.A. Trustee Julian Price, the U.S. Department of Health, Education and Welfare reported that the period of polio vaccine shortage is almost over.

Deputy Surgeon General W. Palmer Dearing said that "we are receiving an increasing number of reports from the states that vaccine supplies are ample to meet current demands and that prospective purchasers are able to receive delivery of the vaccine on relatively short notice."

More than 12 million cc. of vaccine were released during August, and Dr. Dearing estimated that this would be increased considerably during September and October.

In the light of this information, state and local medical societies are urged to reactivate or initiate polio vaccination programs.

"There are still almost 40,000,000 people under 40 years of age in the U.S. who have not received a first injection," Dr. Dearing said. "In addition, there are over 40,000,000 more who have not received all three injections. Thus, the task which remains to be accomplished is a major one if the maximum public protection against paralytic poliomyelitis is to be achieved before the next polio season. Many individuals who received their first and second injections in the early months of this year are due for their third injections now."

Dr. Dearing praised the medical profession's role in initiating and sponsoring vaccination programs and then said: "The success of the programs initiated or participated in by local medical societies early this year gives ample evidence of the important part which local practicing physicians can play in community-wide vaccination programs. I am confident that a repetition this fall of these medical society sponsored programs . . . will ensure equally succesful results."

The Use of a New Sustained Release Liquid Antibacterial Agent in Pediatrics

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TO PRODUCE an effect, drugs that act systematically must be present in the blood in therapeutic concentrations for a reasonable length of time. For example, the effect of bacteriostatic agents is greater when the amount of drug in the blood is constant throughout the infection than it is when the blood concentration fluctuates, because it allows normal phagocytosis and immunological processes to proceed more effectively.[1-2] In practice, the effect of an orally administered drug that produces a continuous, sustained blood concentration resembles the effect produced by continuous intravenous infusion yet does not entail the inconvenience and dangers associated with the latter method of drug administration.

A newly available sulfonamide, sulfaethylthiadiazole (SETD), has recently been prepared in a sustained release liquid dosage form.* In this form, sulfaethylthiadiazole is present as thousands of microscopic spheres that are designed to disintegrate at varying rates. Upon taking the preparation, a part of the total dose is released immediately and produces a blood level that is within the therapeutic range of 8 to 15 mg.%. The remainder of the drug is released in small amounts over the next 8 to 10 hours to offset renal excretion and thereby maintain a constant amount of drug in the blood for 12 hours. By taking the preparation every 12 hours, therapeutic blood concentrations of the drug can be maintained throughout the entire course of an infection.

Because of its interesting therapeutic potential, a study was undertaken to evaluate the efficacy of the sustained release liquid form of sulfaethylthiadiazole in treating pediatric patients with acute and chronic bacterial infections.

THE DRUG

Sulfaethylthiadiazole is rapidly absorbed from the gastrointestinal tract and produces blood levels well within therapeutic concentrations two hours after the administration of an initial 4.0 oral dose.[3] Less than 5% of the drug is acetylated (inactivated) in the blood, and only 5-10% is acetylated in the urine.[4] The excretion of SETD is essentially complete (90-100%) within 72 hours after a single 4.0 gram dose. Provided it is given every 12 hours, the sustained release liquid form of SETD produces blood concentrations that are relatively constant over prolonged periods of time.[5] Most of the common gram-negative and gram-positive pathogenic organisms were found to be sensitive to the drug.[6]

METHOD

Forty-five pediatric patients (21 girls and 24 boys) ranging in age from 1 to 10 years were treated with SETD in sustained release liquid form for acute or chronic bacterial infections. In several instances the chronic infections had been present for nearly a year and had not responded to antibiotic therapy or corrective surgery. In all, 20% of the patients had been treated, unsuccessfully, with one or more of the antibiotics before therapy with SETD was begun. All of the patients presented symptoms common to bacterial infections. Diagnosis of the patients were as follows: Acute tonsillitis (20), purulent otitis media (9, 5 of which were draining), pharyngitis (6), cervical adenitis (3), bronchitis (2), impetigo (2), urethritis, sinusitis, and furunculosis, one each.

Patients were seen either in the office, at home, or in the hospital. Specimens for bacterial culturing, complete blood cell counts, and urinalysis were obtained from all of the patients before initiating SETD therapy and again when therapy was discontinued or within five days thereafter. In most patients the site of infection had cleared and a second specimen could not be obtained for bacterial culturing purposes.

The dose of the sustained release preparation was based on an average of 3/4 of a grain per pound of body weight per day, or, approximately, 1/2 teaspoonful per 15 pounds of body weight every 12 hours. The initial dose was always twice the subsequent dose and was used to insure prompt onset of antibacterial activity. All patients were

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treated for a minimum of five days and were re-examined on or before the fifth day. Patients with acute infections who failed to show a satisfactory response at this time were changed to another drug. Depending upon their response to therapy when re-examined, patients with chronic infections were treated for an additional period of time, usually 5 days. The response of patients in this series were compared with a typical patient response established in children, selected at random, who had not received SETD in sustained release liquid form.

RESULTS

Within five days after therapy with the sustained release liquid form of SETD was begun, all but one of the patients with acute infection had become asymptomatic. Patients with sub-acute or chronic infections responded more slowly as would be expected, and, by the end of 10 days therapy, all but one of these patients were greatly improved. Both of the patients who failed to respond to therapy were treated with an antibiotic and had an uneventful recovery.

The table contains the pathogenic organisms that were isolated from the patients and gives a partial idea of the organisms that SETD is effective against. Results of urinalyses and complete blood cell counts failed to reveal indications of renal toxicity or bone marrow depression. All of the patients who had failed to respond to antibiotics were greatly improved when given SETD in the sustained release form. The drug was well tolerated by all of the patients. Many of the parents commented on the ease of administration of the sustained release liquid form of SETD.

Pathogenic or Potentially Pathogenic Organisms Isolated During the Evaluation

Alpha hemolytic streptococcus
Beta hemolytic streptococcus
Hemolytic staphylococcus albus coag. negative
Hemolytic staphylococcus albus coag. positive
Hemolytic staphylococcus aureus coag. positive
D. Pneumoniae
Enterococcus

The case histores of two patients who had outstanding responses to SETD therapy are given below:

Case 1—A 5 year old boy was first seen in August 1955. The chief complaints at this time were urinary frequency, a low grade fever, and general malaise. During the next six months the symptoms persisted and were refractory to antibiotic therapy. The following laboratory examinations were conducted during this time and were found to be within normal limits: Repeated blood sugars, two I.V. pyelograms, numerous bacterial cultures of the urine, and two chest x-rays. In July 1956 a tonsillectomy and adenoidectomy were performed. The operative and post-operative courses were uneventful but the child continued to run a low grade fever and have urinary frequency. In August 1956, a retrograde pyelogram was done and, except for severe posterior urethritis, was found negative. Throughout this time the patient had been treated with several antibiotics, sedatives, and tranquilizers without response. Following the retrograde pyelogram examination, the patient was started on 2 teaspoonsful of sustained release SETD once every 12 hours. By the end of the fourth day of therapy, the patient's temperature was normal. Treatment was continued for an additional 10 days at which time the patient was completely asymptomatic, and has remained so until the present.

Case 2—A 3 year old girl was being treated for impetigo. The infection was characterized by large bullous lesions containing a purulent exudate scattered over both upper extremities. Bacterial cultures of the exudate revealed the presence of staphylococcus aureus coagulase positive. The patient had shown sensitivity reactions to practically all of the antibiotics and sulfadiazine, and, for this reason, was being treated with bacitracin ointment and antiseptic compresses. When re-examined after 4 days on this therapy, there was no response and some degree of extension of the infection. The child was then placed on 1½ teaspoons of the sustained release liquid form of SETD every 12 hours. At the end of 5 days therapy, the patient was re-examined and all lesions were either completely or nearly completely healed. Therapy was continued for an additional 5 days until all evidence of the infection had disappeared. The patient tolerated the sustained release liquid preparation well with no evidence of sensitivity reactions or toxic effects. Laboratory work (CBC, urinalysis, and culture) completed after her last visit was normal.

DISCUSSION

Results obtained with the drug in the present evaluation are certainly noteworthy. Not only did the sustained release liquid form of SETD effect complete cures in all but two of the patients, but it also prevented the occurrence of secondary infections and post-therapy re-infections. It has been noted that a certain number of pediatric patients, approxi-

mately 2 out of every 5, who have tonsillitis or nasopharyngitis eventually develop otitis media regardless of the type of therapy employed. None of the patients in this series had extensions of the original infection, which seems to imply that, by virtue of producing continuous therapeutic blood concentrations, the sustained release liquid form of SETD provides the patient with complete antibacterial protection.

Other gratifying results of therapy with sulfaethylthiadiazole is sustained release liquid form were the responses in patients who had failed to benefit from antibiotic therapy and the lack of allergic reactions in several patients who had known sensitivities to antibiotics in general. Moreover, the clinical response observed in these patients compared favorably with the responses observed in a randomly selected group of patients who had been treated with antibiotics.

The prompt and complete therapeutic effects produced by the liquid sustained release form of SETD in this series of patients indicates that the preparation can be used effectively in treating common bacterial infections. Moreover, since the preparation did not produce any urinary complications, damage to blood forming mechanisms, nor sensitization reactions, it has the added factor of safety in its favor. Since the increased rate of bacterial resistance has been ascribed to the over-use of antibiotics, the use of less potent, yet effective, antibacterial agents such as sustained release SETD could, conceivably, result in lessening the incidence of bacterial resistance and thereby make the antibiotics more effective when used in treating serious infections.

SUMMARY

1. Forty-five private pediatric patients (21 girls and 24 boys) ranging in age from 1 to 10 years received a sustained release liquid form of SETD for acute or chronic bacterial infections.

2. A bacterial culture, complete blood count, and urinalysis were made on each patient before and within five days after therapy was discontinued.

3. Results show that all but two of the 45 patients, 1 with acute and 1 with a chronic infection, were completely asymptomatic within 5 to 10 days after therapy was instituted. No extension of the original infection or post-therapy re-infections were observed in any of the patients.

4. Results of complete blood cell counts and urinalyses failed to show any toxic effects that were related to the administration of SETD in sustained release liquid form. Also, none of the patients developed sensitization reactions to the drug.

5. The results of therapy indicate that the sustained release liquid form of SETD, by virtue of producing continuous therapeutic blood concentrations of the drug, is an effective form of treatment for acute and chronic bacterial infections, and can be used in place of the most potent antibiotics. Used in this way, the preparation reserves the use of antibiotics for more serious illnesses.

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The Parathyroid Glands

A Review

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THE PARATHYROID GLANDS were first described by Sandstrom in 1880. His description was lost in the mass of literature until recently. Remak, in 1885, again described them, and again the description was lost. In 1891, Gley described an external (superior) pair of glands, extirpation of which lead to tetany, similar to that seen after thyroidectomy. Kohn in 1895, described an additional "internal" pair of glands. In 1900, Vassale and Generale related the parathyroids more closely to tetany, and in the same year, Loebs demonstrated a serum calcium deficiency to be related to muscular contractions. In 1909, MacCallum and Voetlin found the serum calcium to be low in hypoparathyroidism. With this finding, a practical means of treating postthyroidectomy tetany became available.

In 1903, Askanazy associated skeletal lesions with adenomas of the parathyroids, and in 1907, Erdheim related osteomalacia and osteitis fibrosa of von Recklinghausen to hyperplasia of the parathyroids. De Quervain described the first carcinoma of these glands in 1909.

In 1924, Hanson and Collip independently prepared extracts of the parathyroid glands. The next year, Collip was able to produce experimental hyperparathyroidism. He found hypercalcemia to be associated with this disease. In 1925, Schlagenhofer suggested and Mandl performed the first parathyroidectomy for osteitis fibrosa cystica. In 1926, Greenwald and Gross showed that the calcium lost with this disease came from the skeleton. Cope, Albright, Cook and Keating in the past decade have associated nephrocalcinosis and nephrolithiasis with hyperparathyroidism. Rogers, in 1948, showed there to be some association of this disease and duodenal ulcer, though there is some speculation as to whether this is primary, or whether it is secondary to the increased ingestion of calcium by the patient on an ulcer regime.

The parathyroid glands are four in number, normally. In rare instances, these of one side may fuse into one larger structure, and still rarer, there may be accessory parathyroid tissue, though this tissue is said to be almost always in close proximity to the normal gland with which it arose. They first appear at the 6 week stage of embryonic development as thickenings of the endoderm of the third and fourth pharyngeal pouches, along with the anlage of the thymus and thyroid glands, with which they retain their close association. By the ninth week, the inferior pair, or parathymus glands, have migrated from their position on the third pouch, with the thymus, anteromedially to the "superior" pair and have come to lie in their adult location. This is commonly near the lower pole of the thyroid gland, just anterior to the recurrent laryngeal nerve, and caudad to the junction of the inferior thyroid artery with the thyroid gland, in intimate association with the thyroid capsule. Not infrequently, however, this pair of glands may lie just caudad to the thyroid, or on, or in the upper pole of the thymus. In the occasional case, anomalous location may be found anywhere between the upper pole of the thyroid and the arch of the aorta, several cases having been reported of finding this structure within the pericardium, or in that region.

The true parathyroid glands arise with the thyroid from the fourth pouches and assume a position on the dorsomedial aspect of that gland at the junction of its upper and middle thirds, superior to the first described pair. This pair may be found as high as the upper border of the larynx or as low as the lower pole of the thyroid, and may lie laterally in the carotid sheath. They are occasionally found in a retroesophageal position. Both pairs are found between the middle and prevertebral layers of the deep cervical fascia.

Intrathyroid position of these glands has been described, but it has always been felt that these cases were erroneously so described, and that the intrathyroidal gland was simply one that had been included in the depths of a crypt in the surface of the thyroid. However, recently, two cases have been reported that were found unquestionably within the thyroid, proven by splitting the gland to discover them, and by careful study of the thyroid gland for

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crypts communicating with the parathyroid gland.

These glands are minute, averaging, normally, 30-40 milligrams in weight, each. They have a characteristic yellowish hue, ranging to brownish, depending on the fat content. This color is said to make them easily distinguished from the surrounding structures, if blood staining is avoided. The hyperplastic or adenomatous gland may range on to a chocolate brown color.

They have a definite delicate capsule beneath which courses a fine network of subcapsular capillaries. Blood supply enters each gland by a single artery which arises from the inferior thyroid artery or one of its branches, except in the gland that is anomalously placed developmentally, in which case the artery arises from the surrounding tissues, depending on the location. Thus, the gland that has migrated into the mediastinum is usually connected with the thyroid region by a vascular pedicle.

In cases of functioning parathyroid adenoma, the remaining glandular tissue may undergo atrophy, though grossly this may be difficult to determine, as the atrophy is manifest by an increase in the intraglandular fat replacing the parenchyma. The gland may retain its normal size and color. The finding of three normally appearing glands is not sufficient evidence that there is not an adenoma in the fourth.

Parathyroid adenomas account for 89 per cent of cases of hyperparathyroidism, 6 per cent of these adenomas found at the Mayo Clinic being multiple. They range in size from that of a normal gland up to 100 grams or more in weight. The larger tumors are usually found with ease, the smaller ones may well be hidden among the areolar tissues of the neck, and offer a real challenge to the surgeon. A very rough idea of the size of the tumor to be expected is gained by the height of the serum calcium elevation, the larger glands, as a rule, producing higher elevations.

Primary, or Wasserhelle, hyperplasia of the glands, first described in 1934 by Albright, accounts for 10 per cent of cases of hyperparathyroidism. In this condition, all parathyroid tissue is involved. The cells are large and clear, arranged in nests among the stroma which is scanty or depleted of its normal fat content. The nuclei of the cells are small, well defined, and located peripherally near the stromal side of the cell.

Carcinoma of the parathyroid glands is rare, accounting for less than 1 per cent of cases of hyperparathyroidism. It is usually a functioning tumor. Histologically, differentiation from the adenomatous gland is difficult or impossible, the differentiation lying in the presence or absence of capsular or vascular invasion.

The function of the parathyroid glands is the elaboration and liberation of parathyroid hormone. The chemical anatomy of this substance is not known. The regulation of flow from the parathyroid is independent of the pituitary, unlike the other endocrine structures. It is an all or none outpouring of hormone from the glands, stimulated or depressed by the serum calcium level. It is, then, the function of this hormone which concerns us.

Collip believes that the action of the hormone is on the osteoclasts of bone, causing them to proliferate, destroying bone, and thus releasing calcium into the circulation in excess of normal.

This concept is supported by the work of Houssay, who, in animal experiments, produced hypercalcemia and decalcification of bone in nephrectomized animals with parathyroid extract.

Albright, on the other hand, feels that the action of parathormone is on the proximal renal tubule where phosphatase activity is depressed, preventing the reabsorption of phosphorus, leading to hyperphosphaturia and hypophosphatemia, followed by a rise in serum calcium and tertiary hypercalcinuria. This is supported by the finding, after administration of parathyroid extract, of a rise in urinary, and fall in serum phosphorus almost immediately, followed after a lag period by a rise in serum and urinary calcium. (Table I).

Table I

Effects of Parathyroid Hormone

— Primary —

1. Elevation of Urinary Phosphorus Excretion (normal—2 grams daily)
2. Depression of Serum Phosphorus Level (normal—3.5 ± 0.5 milligrams per 100 cc)
3. Elevation of Serum Calcium Level (normal—9.5-10.4 milligrams per 100 cc)
4. Elevation of Urinary Calcium Excretion (normal—0.2 grams daily)

Reconciliation of the two theories has been attempted, postulating a dual role of the hormone, with the latter mechanism primarily and the former secondarily important.

In addition to this calcium-phosphorus regulation, probably through the medium of the calcium elevation, the hormone regulates muscular tone via guanidine metabolic effects, and vasoconstrictor activity of nicotine, epinephrine, and the pituitary is controlled by it. There is a partial regulatory effect

on carbohydrate tolerance, through phosphatase depression. Parathormone also elevates the blood ammonia level by two mechanisms: depression of the liver; and by depressing glutaminase activity in the distal renal tubule, preventing ammonia excretion. This results in acidosis and renal insufficiency. The acidosis draws calcium from bone to use as base for neutralization.

The eventual renal insufficiency causes an elevation in serum phosphorus which depresses the serum calcium. Depression of serum calcium leads to stimulation of the parathyroids to increase output of parathormone, leading to hyperplasia, and secondary hyperparathyroidism. The net result of this vicious cycle is nephrocalcinosis and nephrolithiasis.

If negative calcium balance ensues, osteoblastic activity increases, and with it, alkaline phosphatase activity. These are outstripped by osteoclastic activity, however, so that osteoporosis occurs with filling of the trabeculae with fibrous and connective tissue. This is fibrous-cystic bone.

In cases of depression of parathormone, or the absence of it, as occurs in the newborn as a compensatory mechanism to maternal hyperparathyroidism, rarely, and as occurs after extirpation of the glands at surgery, and as is simulated by a rare congenital defect in which the tissues are resistant to the effects of the hormone, chronic parathyroid tetany occurs, manifested chemically by a fall in the serum calcium level and a rise in serum phosphorus, to levels as high as 12 milligrams per cent. Paralleling these changes is the fall in urinary calcium.

These lead to the reverse of the changes of hyperparathyroidism, with muscular hyperirritability, painful spasms, and convulsions. The critical level for this is 7 milligrams per cent of calcium.

Hyperparathyroidism may occur at any age over 12. Prior to that age the diagnosis is open to question. Usually it appears after the age of 20. The sex distribution is equal. The symptomatology may be divided according to the system which presents the primary pathology, though many cases are asymptomatic, and are found when serum calcium determinations are obtained for other reasons, or accidentally.

Symptoms of Hypercalcemia, per se, are: (Table II)

1. Decrease neuromuscular excitability to mechanical and to electrical stimulation, resulting in hypotonia;
2. Abdominal distention, constipation and anorexia;
3. Nausea and vomiting;
4. Short Q-T segment in the EKG.

Table II

Effects of Parathyroid Hormone

— Secondary —

1. Decrease in Muscular Tone
2. Halisteresis
3. Nephro-gastro-cerebrocalcinosis (sites of phosphatase activity)
4. Renal calculi
5. Renal insufficiency
6. Osteitis Fibrosa.

Symptoms of Osseous Diseases are:

1. Painful skeleton, due to demineralization;
2. Pathological fractures;
3. Loss of height due to vertebral compressions and to herniation of the intervertebral disc into the bodies of the vertebrae;
4. Osteitis fibrosa cystica;
5. Subperiosteal resorption of bone.

Symptoms of urinary origin are:

1. Polyuria } due to the diuretic effect of the
2. Polydypsia } hormone;
3. Calculi are usually multiple.

(*Note:* Postoperatively, to prevent acute nephrolithiasis, and as a test as to whether the gland causative of hyperparathyroidism is out, give the patient 2000 cubic centimeters of 5 per cent glucose in water. If there is 500-600 cubic centimeters or less of urinary output in 24 hours, it is a positive test, indicating successful removal of the hyperfunctioning tissue.)

This is a disease where the laboratory makes rather than confirms the diagnosis by the demonstration of an elevated serum calcium level and of a depressed serum phosphorus level.

Acute hyperparathyroidism is an exacerbation of the chronic state precipitated by trauma, such as surgery, for some other related or unrelated disease, characterized by a marked diuresis with dehydration of plasma and the acute precipitation of calcium in tissues, sometimes fatal due to acute nephrocalcinosis and renal insufficiency.

Differential diagnosis must include all bone diseases and renal stones. The finding of normal serum calcium rules out hyperparathyroidism; the finding of an elevated calcium value rules out all except:

1. Paget's disease of bone differs from osteitis fibrosa in that it is a circumscribed disease. Where there is normal bone, it is absolutely normal.
2. Hypervitaminosis D is usually revealed by history of taking the drug.

3. Multiple myeloma patients usually will have a normal serum phosphorus and normal phosphatase, and the findings of Bence-Jones protein is pathognomonic. The bone lesions are somewhat dissimilar, in that they are more acutely defined than those of osteitis; they are punched out rather than moth-eaten.

Treatment of hyperparathyroidism is the surgical removal of the offending tissue, *i.e.*, the parathyroid tumor or the hyperplastic tissue. The first operation should be the one at which successful treatment is carried out, in that secondary exploration for minute tumors is technically extremely difficult In case, after all four glands are exposed and examined, no tumor is present, and hyperplasia is suspected or diagnosed, the problem remains of how much to take out, or rather how much to leave in, without leaving it devitalized. In general, leaving a total amount of viable tissue equal to the total weight of the normal glands, *i.e.*, 120 milligrams, is felt to be the maximum, and leaving the amount equal to that of a single gland, *i.e.*, 30 milligrams, the minimum requirements for safety from both tetany and from continued hyperfunction.

Treatment of Hypoparathyroidism, or Tetany, is aimed at the accomplishment and maintenance of normal levels of serum calcium and phosphorus. Theoretically, the administration of parathormone in the same manner in which insulin is used would be the answer, but it is not because of a tolerance to the hormone which is developed after usage. Other measures must be resorted to.

1. Calcium chloride or gluconate solution, 10 cubic centimeters of 10 per cent solution given intravenously, may be necessary for treatment of the acute episode of tetany to restore rapidly the level of ionized calcium.
2. Vitamin D (50,000-200,000 units daily) with large amounts of oral calcium is effective, the maintenance dosages being determined by clinical followup. Vitamin D intoxication must be guarded against, usually ushered in by nausea and vomiting, so that when the dose of Vitamin D being given is considered therapeutic and the calcium levels are still low, dietary calcium should be increased first.
3. Dihydrotachysterol (A.T. 10) is midway between vitamin D and parathormone in its effectiveness, without the development of toxicity or of tolerance.
4. Parathyroid gland transplants may be performed. I have not found literature convincingly confirmatory of its value, and the continued use of other means of treatments makes one think that the results of this type of treatment are not particularly spectacular.

SUMMARY

1. A brief historical review referable to the parathyroid glands is presented.
2. Parathyroid glandular embryology and surgical anatomy is discussed.
3. Hyperparathyroidism, outlining the pathology and physiology involved, is summarized.
4. Hypoparathyroidism is briefly discussed.

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Chemical Debridement of Infected Wounds

With a Papain-Urea-Chlorophyll Ointment

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IN RECENT YEARS there has been increasing interest in proteolytic enzymes for debridement of wounds. Numerous investigators have reported the streptokinase-streptodornase and trypsin preparations to be not only effective in removing necrotic tissue but also non-injurious to viable tissue. The fact that there has not been universal enthusiasm among surgeons for enzyme therapy is perhaps explainable by a feeling on the part of some that the results obtained by the preparations available could be equally well accomplished by surgical debridement and the method of application was not sufficiently convenient to warrant its preference to surgical debridement. Our interest was aroused by a report[1] of a new preparation, incorporating the proteolytic enzyme, papain, with urea and chlorophyll derivatives in an ointment base, which seemed to have broader therapeutic application and certain practical advantages. This report is concerned with clinical observations on the efficacy of this ointment for debridement and preparation for surgery of chronically infected wounds and ulcers.

The preparation* used in this study contained standardized papain 10%, urea U.S.P. 10% and water-soluble chlorophyll derivatives 0.5% in a hydrophilic ointment base. The use of papain has been traced back to early Biblical times. Hwang and Ivy[1] reviewed the many medical applications of this enzyme up to 1951, including several recent references to its use as a debriding agent. That papain had not assumed importance as a topical agent up to that time appears to have resulted from a lack of standardization of the material. Urea is incorporated in the preparation under discussion to enhance the debriding qualities of papain. As a protein solvent, urea is said to render necrotic tissue more susceptible to digestion by the proteolytic enzyme. The efficacy of water-soluble chlorophyll as a stimulant to healing has been recognized and reported by many investigators. The combination of the proteolytic agents, papain and urea, with chlorophyll derivatives should offer the very desirable complementary actions of debridement plus promotion of normal tissue healing. Previous observers[2,3,4] have demonstrated that the anti-inflammatory properties of chlorophyll derivatives are essential to the preparation and permit its continuous use over prolonged periods.

All cases selected for this study were chronically infected, indolent wounds and ulcers which had been resistant to therapy by the usually accepted methods. The types of cases treated were:

Decubitus ulcers, secondary to vascular or neurological disorders	8
Infected wounds secondary to compound fractures	9
Sinus tracts or ulcers secondary to chronic osteomyelitis	3
Pressure sores secondary to prolonged plaster immobilization	2
Total	22

All cases in this series were personally treated by the writer over a period of twelve months and were either private or ward patients on the Orthopaedic Service at the Medical College of Virginia Hospital. The wounds were gently sponged or irrigated with normal saline solution each morning. The wound area was then covered with a moderately thick layer of the papain-urea-chlorophyll ointment, over which was placed a light dressing of sterile gauze. This same procedure was followed each day with any residual ointment being sponged or irrigated away before application of additional ointment.

CLINICAL RESULTS

In the eight cases of decubitus ulcers, the above method of treatment was carried out for an average of 18 days. When the ulcers were free of necrotic or cellular detritus, the papain-urea-chlorophyll ointment was stopped and warm moist saline packs applied for 24 hours prior to skin grafting or plastic procedures. All of the ulcers in this group showed

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*Panafil Ointment (Rystan Company, Mount Vernon, New York).

very gratifying results with rather rapid eradication of necrotic debris, and the early appearance of bright red granulation tissue which first appeared at the periphery of the wounds and gradually spread over the entire wound area. In four of the cases, the granulation tissue of the periphery became hyperplastic after several days and bled excessively when the dressings were changed. In each of these four cases, the hyperplastic granulation tissue was scraped down with a knife at the time of surgery to provide a more desirable bed for the skin graft.

In the nine cases of infected wounds secondary to compound fractures, the improvement of the appearance of the wound was very striking within an average of seven days after use of the papain-urea-chlorophyll ointment. All of these cases had some infection of the underlying bone. After debridement of the wound with this ointment, surgery was done, consisting of either sequestrectomy of the infected bone followed by secondary closure of the wound, or skin grafting either of split thickness or full thickness flap grafts. Two of the cases had further drainage from the wounds after surgery, which gradually subsided with continuation of antibiotic therapy. It was definitely felt that all of these cases were benefited by the use of the ointment in that they were ready for definitive surgery at an earlier date than were the three cases of similar nature which were used as controls.

In the three cases of infected sinus tracts secondary to the underlying long standing chronic osteomyelitis, the papain-urea-chlorophyll ointment was less effective than in the other types of wounds treated in this series. In these three cases, however, the openings of the sinus tracts were small and the ointment could not be effectively introduced into the depth of the tracts to the underlying infected bone. Two of these cases had large foul smelling indolent ulcer type of openings to the sinus tracts and the ointment had little, if any, effect in reducing the size of the ulcer. It was noticeable, however, that the odor of the wounds was considerably improved and the area around the opening of the sinus tract soon developed a more healthy appearance, with granulation tissue appearing on an average of seven days. All of these cases were ultimately subjected to sequestrectomy with excision of the infected sinus tracts and eventual healing. It is believed that had it been possible to introduce the ointment into the base of the sinus tracts, more effective results would have been noticeable in these particular cases.

The two instances of pressure sores secondary to prolonged plaster immobilization were ulcers which developed over the upper sacral area due to improper padding of the casts. After removal of the casts, the ulcers were treated with the papain-urea-chlorophyll ointment. There was very rapid appearance of healthy granulation tissue and early epithelization of the wounds, which made definitive surgery unnecessary.

COMPLICATIONS NOTED

In this group of 22 patients, three patients complained of burning pain in the wound area after application of the papain-urea-chlorophyll ointment. The burning usually persisted for about one hour after application and then subsided without further complaints from the patient until the following day when the ointment was again applied. In these three instances of burning following application of the ointment, no other unusual reactions were noted and the wounds reacted normally with early eradication of cellular debris and with rapid appearance of healthy granulation tissue. The complaints of burning following application of the ointment were not severe and did not constitute any valid reason for discontinuing the use of the ointment.

In two instances in this series, skin surrounding the wounds developed small maculopapular blebs which caused severe itching. The blebs became so irritated in one instance that it was necessary to discontinue further therapy with the papain-urea-chlorophyll ointment. The other case with bleb formation did not show further progression of the blebs and application of the ointment was continued. The itching continued in this case, but it was felt that the benefits derived from the ointment were sufficient to warrant continuation of therapy.

SUMMARY AND CONCLUSIONS

Twenty-two cases of chronically infected wounds and ulcers were treated with an ointment containing the proteolytic agents, papain and urea, and water-soluble chlorophyll derivatives. In 18 cases, very marked and rapid improvement in the appearance of the wounds occurred. Excessive necrotic and cellular debris was effectively removed and there was early appearance of healthy granulation tissue. In three cases of sinus tracts secondary to chronic osteomyelitis, two of which had indolent, infected ulcers at the openings, little improvement in the basic condition was observed although odor was reduced and granulation tissue was produced around the sinus tract openings. Treatment with this ointment was discontinued in one case because of the appearance

of maculopapular blebs in the skin surrounding the infected wound.

It is concluded that the papain-urea-chlorophyllin is definitely beneficial in debriding infected wounds and ulcers and preparing them for early surgery or grafting. In the two cases where the ointment was employed to promote healing by epithelization, the results were impressive.

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Poisoning First Aid Rules

Speed in starting first aid measures is essential after accidental poisoning, according to the American Medical Association's Committee on Toxicology.

First aid measures are aimed at helping to prevent absorption of the poison and must be started at once, the committee said in a new pamphlet issued as a guide for the public in the treatment of accidental poisoning. The pamphlet's instructions are reprinted in the October 12th A.M.A. Journal.

When poisoning occurs, one person should begin treatment while another calls a physician. When only one person is available to give treatment, he should call a physician first if the poison is a corrosive or a petroleum product. A corrosive may be an acid substance such as a toilet bowl cleaner or an alkali such as household bleach.

When a non-corrosive poison is swallowed, vomiting should be induced and then a physician called. Vomiting can be started by giving the patient milk, plain water, or warm salt water, or by placing the blunt end of a spoon or the finger at the back of the patient's throat.

Vomiting should not be induced if the patient is unconscious, in a coma, or in convulsions; has swallowed petroleum products, such as kerosene, gasoline, or lighter fluid, or has swallowed a corrosive, such as a rust remover, styptic pencil, lye, washing soda, or ammonia water.

Symptoms of corrosive poisoning are severe pain, burning sensation in mouth and throat, and vomiting.

When retching and vomiting begin, the patient should be placed face down with the head lower than the hips. This prevents the vomitus from entering the lungs and causing further damage.

In the case of inhaled poisons, the patient should be carried to fresh air immediately, his clothing loosened, and artificial respiration begun if breathing has stopped or is irregular. The patient should be kept warm and as quiet as possible.

With skin contamination, the skin should be drenched with water. A stream of water should be held on the patient while removing his clothes. Rapidity in washing is most important in reducing the extent of injury. When the eyes are contaminated, they should be washed immediately with a gentle stream of running water. Chemicals should not be used, since they may increase the extent of injury.

Chemical burns also should be washed with large quantities of running water, except those caused by phosphorus. Ointments, greases, powders, and other drugs normally used for burns should be avoided.

Alcohol should not be given in any kind of poisoning.

The first-aid instructions may be obtained by writing to the A.M.A. Committee on Toxicology, 535 N. Dearborn Street, Chicago 10, Illinois.

Melena in Infancy and Childhood

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RECTAL BLEEDING in infants and children is a condition which is alarming to the family and disturbing to the physician.

Several common causes for this symptom come immediately to mind, and from an anatomical point of view, the explanation for it should not be difficult to find. Unlike adults in whom peptic ulcer is the commonest source of massive intestinal bleeding, children uncommonly have gastric or duodenal ulcers, although the significance of peptic ulceration in a Meckel's diverticulum is well understood. It is rarely necessary to explore pediatric patients for massive bleeding until the diagnosis is established, although this possibility must be kept in mind for those children who actually appear in danger of exsanguination.

The most frequent causes for massive rectal bleeding in infants and children are: (1) Meckel's diverticulum, (2) intestinal polyps, (3) intussusception, and (4) reduplications of the intestinal tract. Other less common sources are blood which has been swallowed, various ano-rectal lesions, cancers of the bowel, parasitic infestations, allergic phenomena, blood dyscrasias, ulcerative colitis, and local trauma.

Diagnostic studies are carried out in a systematic manner to include rectal examination, proctoscopy and x-rays of the colon, as well as general physical examination and complete blood studies.

When confronted with melena in a child, the physician is called upon to ascertain not only the cause for the bleeding but in addition the degree of severity. We must remember that infants and small children are not "little adults", and their care is decidedly different from the care of grownups. Shock from blood loss is apt to be more severe and less amenable to treatment than it is in adults. Furthermore, chronic blood loss results in failure of growth and development—for example, in hookworm disease, malnutrition, poor development and anemia go hand in hand.

Several interesting cases of severe rectal bleeding in early childhood have recently been seen and will be briefly discussed.

Presented at the meeting of the Virginia Surgical Society at White Sulphur Springs, West Virginia, March 17, 1956.

Case #1 (Meckel's diverticulum)—E.N.F., a 9 month old white female child, whose father is a physician, was admitted to Medical College of Virginia Hospital on March 4, 1954. About 3½ weeks previously she had passed some blood into her diaper, and later she had had a large bloody stool. A barium enema x-ray was normal, but after further bleeding an emergency laparotomy was performed on February 12, 1954, in her home town. Operation confirmed the father's impression of Meckel's diverticulum. Because of encircling of the ileum by the diverticulum, it was necessary to resect the intestine, and a one layer end-to-end anastomosis was performed. Subsequently she developed signs of peritonitis with accompanying dehydration, and she was carried to another city for pediatric care. Three days later her temperature rose to 106° and this was accompanied by cyanosis, dyspnea and opisthotonos. Emergency operation disclosed leakage from the anastomotic site, and double-barreled ileostomy was performed to exteriorize this area. Continuous discharge of liquid feces from this site caused great excoriation of the abdominal wall, and despite excellent restoration and maintenance of her general condition, the child was a restless, irritable and wild-looking patient, suffering obvious pain. After admission to the Medical College of Virginia Hospital, she was again operated upon and the ileostomy withdrawn into the abdominal cavity. The bowel ends were resected, and again anastomosed. Recovery and subsequent development have been complete.

Comment: Peptic ulceration of Meckel's diverticulum was the cause for bleeding in this case. The diagnosis of this condition is seldom made before operation except when bleeding occurs. However, whenever a Meckel's diverticulum is found at operation, it should be removed so as to prevent bleeding, intestinal obstruction or other complications. In this case, the anastomosis was performed by the aseptic method with only one layer of sutures. It is my feeling that the open, two layer closure is safer, and this might have prevented all the complications in this case.

Case #2 (Intestinal polyps)—T. P., a 28 month old colored male, was admitted to Dooley Hospital March 27, 1951. He was born two months prema-

turely but subsequent had developed normally. For one month before admission the child's mother had intermittently noted bright red blood on his clothes, and on the day of admission she discovered soft reddish protrusions from the anus. In the emergency room two rectal polyps were ligated and excised but the child was admitted because of resultant hemorrhage. Additional studies, including proctoscopic examination and barium enema, revealed diffuse polyposis of the colon. Despite the early age of the child total colectomy was deemed advisable and operation was performed June 1, 1951. Total colectomy and ileo-anal anastomosis by the pull-through method were performed. Unfortunately, when the terminal ileum was passed down through the pelvis and withdrawn through the anus by the perineal team of operators, the small intestine was completely twisted in a cork-screw fashion. This resulted in unrecognized intestinal obstruction, necessitating reoperation one week later. Resection of the terminal small bowel and ileostomy were necessary. Since then the child has done fairly well but has had to have revision of the ileostomy because of stricture.

Comment: Intestinal polyps should always be removed because of their tendency to become malignant. When diffuse polyposis of the colon occurs, it is necessary to resect the involved bowel, and sometimes as in this case, total colectomy is indicated. The anticipated result in this instance was not accomplished but the principle of the procedure is good and should be employed in such cases.

Case #3 (Intussusception)—D.H., a 7 month old white male infant, was admitted to Medical College of Virginia Hospital July 14, 1948, because of bloody diarrhea of 48 hours' duration. On admission, the patient was very ill, restless, pale and dehydrated. His temperature was 104° and the classical sausage shaped mass was felt abdominally extending from the right lower over to the left upper abdomen. Also, on rectal examination a mass was palpable and there was thin bloody material on the glove finger. After emergency restorative treatment, the baby was explored and massive intussusception was found. Interestingly enough, this began as the typical ileo-colic type, but was compounded by a retrograde intussusception of the transverse colon, progressing from the splenic flexure nearly to the hepatic flexure. This situation was manually reduced and the child recovered and was well one year later.

Comment: Intussusception is found nearly always in infants under two years of age unless it is generated by efforts of the bowel to propel a polyp along the intestine. No cause has been found for the type in infancy where no polyp is present to incite the intussusception. When palpation of the mass fails to effect reduction of the intussusception, it is now generally accepted that attempts should be made to reduce it by barium enema under fluoroscopic guidance. This has been described by Ravitch and has been successfully employed. When this procedure fails, operative reduction must be undertaken, although many of these children are so critically ill that massive resections of the irreducible intussusceptions are very hazardous. This condition is not rare and is usually thought of whenever melena in infants occurs.

Case #4 (Intestinal reduplications)—A.S.D., a 15 month old male white child, was admitted to Medical College of Virginia Hospital on April 19, 1955, because of shock resulting from massive rectal bleeding for one day. At 6 months of age a similar episode necessitated hospitalization in another state, and studies failed to reveal the cause for the bleeding. He also had been operated upon for a benign thymoma as a newborn infant. At the present admission, after transfusions corrected the shock, diagnostic studies were carried out but no cause was found for the bleeding. Operation one week after entry disclosed a very unusual reduplication of the small intestine approximately at the junction of the jejunum and ileum. It lay within the leaves of the mesentery and communicated at its distal end with the small intestine. The stoma was surrounded by aberrant pancreatic tissue and microscopically the reduplication was shown to be lined with gastric mucosa. Resection of the adjacent two feet of bowel including the reduplication was performed and the bowel anastomosed. Recovery has been uneventful and there has been no further bleeding.

Comment: Reduplications can occur at many sites in the gastro-intestinal tract and may contain any type of intestinal mucous membrane. Their presence is often announced by the discovery of a mass in the abdomen but massive bleeding can occur from peptic ulceration or other types of erosion.

Case #5 (Hemorrhagic Proctitis)—T.E.W., a 7 month old white male infant, had three large bloody stools within a period of two hours and was admitted to Stuart Circle Hospital on May 29, 1953. There were signs of air hunger on admission and he was transfused because of this and because of a hemoglobin of 8.6 Gms. Proctoscopic examination revealed a rather diffuse punctuate proctitis. Barium enema was normal. There was no known history of

drug medication or other possible cause for the proctitis. The bleeding has not recurred and a repeat x-ray of the colon was also normal.

Comment: The usual cause for a hemorrhagic proctitis is either a drug reaction or irritation from external stimuli such as irradiation or the introduction of foreign bodies. It is unusual to see proctitis of unknown etiology in an infant, and every effort should be made to rule out other causes for bleeding or to determine the origin of the rectal inflammation.

In conclusion, it may be well to reiterate a few significant points about rectal bleeding in infants. First, there is nearly always a serious cause for the bleeding and unlike adults it very seldom comes from hemorrhoids or fissures. Likewise bleeding duodenal ulcers are unusual in children. Second, infants and small children do not tolerate the loss of significant amounts of blood and must be carefully and closely watched following bouts of melena. Third, for complete evaluation of the patient, thorough examination must be accompanied by proctoscopic examination, barium enema x-rays, sometimes gastro-intestinal series, and often complete blood studies for bleeding tendencies. Finally, when the etiology of the bleeding is not determined from these studies and it recurs or is of very serious degree, surgical exploration should be carried out to correct or remove the condition causing the bleeding.

805 West Franklin Street
Richmond, Virginia

Prolonged TV Watching

Prolonged sitting in awkward positions while watching television may produce serious circulatory disorders in the legs. Writing in the October 12th Journal of the American Medical Association, Dr. Meyer Naide reported three cases of blood clots occurring in the leg vessels after the patients had sat in awkward positions watching TV. Similar disorders may occur after driving long distances in a car, especially in tall men who are "peculiarly susceptible" to such ailments.

Dr. Naide recommended that television viewers get up and move about at least once an hour in addition to moving their legs frequently. Girdles and other tight garments also should be removed before prolonged TV watching.

All three patients recovered with relatively few effects after treatment with anticoagulant and vasodilator drugs.

One man sat with the back of his knee pressed against the edge of the chair for one and a half hours; another man with his leg thrown over the arm of the chair for an hour, and a woman with her leg tucked under her off and on for two hours.

The men had venous thrombosis (a blood clot in a vein) of the leg, followed by pulmonary embolism (a condition in which the clot moves to and blocks a vessel in the lungs). The woman had a thrombosis in the femoral artery of the leg.

Dr. Naide also mentioned an earlier report of 21 sudden deaths from pulmonary embolism in persons in or leaving English air-raid shelters during World War II. The cause was venous thrombosis in the legs, resulting from long periods of sitting on chairs or benches with the edges compressing the veins.

Dr. Naide is associated with the Woman's Medical College of Pennsylvania and the Albert Einstein Medical Center, Philadelphia.

The Incidence of Gout in Orthopaedic Practice

FREDERICK W. ROOK, M.D.
JAMES H. MASTERSON, M.D.
Arlington, Virginia

THIS STUDY was undertaken over the last three years because of what appears to be an increase in incidence of gout, in a large orthopaedic practice, which sometimes did and sometimes did not follow the usual manifestations. Our interest was stimulated by the appearance of two cases of hydrarthrosis of the knee which gave a clinical picture of infection but which showed no growth. Both had a high synovial fluid uric acid and responded adequately to Colchicine therapy.

According to our definition "Gout is a disorder of uric acid metabolism accompanied by arthralgia which is often manifested by an unusual response to a minimal injury, which shows an elevation of the uric acid, and which responds promptly to Colchicine or other gout medication."

From August, 1953, to January, 1957 at Anderson Clinic some sixty thousand patient visits have been made. This includes 9,399 new patients. From this group we have had clinical evidence of gout in sixty-six for a percentage of 0.70 per cent.

All suspected cases have had blood urea nitrogen, blood uric acid, sedimentation rate, complete blood count and peripheral blood smear carried out along with a control uric acid at the same time. One laboratory technician was assigned to carry out, in a routine fashion all of the laboratory procedures on all patients.

We have found that the average of the controls runs no higher than 2.9 milligrams per cent for either sex with the highest control over the three and one-half year period running 3.4 milligrams for males and 3.6 for females. The average clinical gout case has run slightly greater than 6 milligrams per cent with a low rating of 4.3 milligrams and a high of 10.2 milligrams. Females in the series have tended to run a lower uric acid and not to follow the florid manifestations generally shown by males in the series, but the response to Colchicine medication has been most gratifying to the physician and the patient.

SUMMARY

This presentation has shown gout in a percentage of 0.70 out of a total of 9,399 patients seen in what has been considered a routine orthopaedic practice over a period of three and one-half years.

It would appear that there are two variables in regard to the incidence found in these patients, but each of these variables tend to cancel one another.

In each instance, the patients, at least 80 per cent, were direct referrals from other physicians, either their general practitioner or in some instances their internist. On the one hand, the patients covered in this group were those that had exhibited to their referring physicians symptoms referrable to their bones and joints, which was the reason for referral. This, of course, would tend to make our incidence of gout higher than routine surgical or medical practice, as in most cases the symptomatology was localized to the joints.

The other variable is that most of these patients had been previously screened and any case showing the typical findings of a gouty arthritis such as

TABLE No. 1

INCIDENCE OF GOUT IN ORTHOPAEDIC PRACTICE

Total No. Patients	%	Total No. Diagnosed as Gout	%	No. Cases Previously Diagnosed	%
9,399	100	66	0.70	6	0.06

TABLE No. II

CHARACTERISTICS—AGE AND SEX OF PATIENTS DIAGNOSED AS GOUT

Age Range Total—66 Patients	Sex	
	Male	Female
20–29	2	2
30–39	10	3
40–49	13	5
50–59	14	6
60–69	7	1
70–79	1	1
80–89	1	.....
Totals.....	48 (73%)	18 (27%)

tophi hot swollen tender joints, etc., would have already been treated as their diagnosis was made.

It is our opinion that these two variables in this group of cases presented probably do cancel one another. The incidence that we have shown in orthopaedic practice would probably be very similar to that of most practices, either that of a general practitioner, internist, or as in this particular case, an orthopaedic surgeon.

Of interest, we feel, is the fact that eleven (16.6 per cent) of the sixty-six patients gave a definite history of trauma which appears to be a precipitating factor.

Table No. I shows the incidence of gout in orthopaedic practice. Of a total number of 9,399 patients, sixty-six (0.70 per cent) were diagnosed as having gout. Of these patients only six had previously been diagnosed as such.

Table No. II shows the age and sex characteristics of patients diagnosed as having gout.

Table No. III shows the location and distribution of the symptoms and findings.

Table No. IV shows the contrast of laboratory and clinical findings in sixty-six patients. This is a most interesting table, as it shows sixty-five patients having arthralgia but the finding of only three patients (4.5 per cent) showing any presence of tophi. Of this same group only five patients (7.6 per cent) had x-rays that could be diagnosed as a gouty arthritis.

Table No. V shows the specific findings of the laboratory in regard to range and average reading. In those diagnosed as gout, the range of the fasting blood uric acid ran from 4.6 to 10.2 milligrams per cent in males and from 4.3 to 7.8 in females. The normal uric acid controls taken at the same time revealed a range in males from 2.4 to 3.4 and in females from 2.5 to 3.6. Of interest is that the sedimentation rate ranged from 2 to 55, the lowest of 2 being in one male and two female patients having the 55. The average sedimentation rate finding was 22.5. The remaining blood workup, including complete blood count, blood urea nitrogen, and peripheral blood smear was all completely normal.

TABLE No. III

Location and Distribution of Symptoms and Findings

Joints Affected	Subjective	Objective	Positive X-Rays
Foot	28	20	2
Knee	11	12	.....
Big Toe	5	8	1
Multiple	11	3	.....
Hand	6	6	1
Ankle	5	7	1
Elbow	1	1	.....
Hip	1	.....	.....

TABLE No. IV

Contrasting Laboratory and Clinical Findings in the Diagnosis of Gout—66 Patients

Total No. Arthralgia		Total Tophi		Total Positive X-Rays		Total Elevated Uric Acid		Total Elevated Sed. Rate	
No.	%	No.	%	No.	%	No.	%	No.	%
65	98	3	4.5	5	7.6	66	100	40	60.6

TABLE No. V

Laboratory Data Showing Specific Findings
Re: Range and Average Reading

Uric Acid in Gout (100%)				Uric Acid Controls (100%)				Sed. Rate-Gout (100%)		CBC	BUN
Range		Average		Range		Average		Range	Average		
Male	Female	Male	Female	Male	Female	Male	Female				
4.6 to 10.2	4.3 to 7.8	6.8	5.9	2.4 to 3.4	2.5 to 3.6	2.9	2.9	2 (1 male) to 55 (2 female)	22.5	N	N .....

It is also the authors' opinion that the average normal fasting blood uric acid is considerably lower than is given in most text books and that any elevation above an empirical figure such as 4.0 milligrams per cent should be considered an indication for a complete workup as it denotes in our opinion, a definite tendency toward an upset in uric acid metabolism.

South 25th Street and Army-Navy Drive
Arlington, Virginia

TV May Help School Work

Contrary to popular belief, television's effect on school children is not all bad, Northwestern University studies have shown. In fact, children's strong interest in television may be an asset, if television watching is handled properly in the home, according to Paul Witty, Ph.D., director of the psycho-educational clinic, Northwestern University, Evanston, Ill.

Each year since 1949 the Northwestern clinic has studied the TV viewing habits of more than 2,000 children in the Chicago area. Children, their teachers, and their parents have been interviewed, Witty said in the November Today's Health, the American Medical Association's popular health magazine.

By the spring of 1950, after TV's first appearance in 1949, 43 per cent of the children interviewed had TV sets at home. In 1951, 68 per cent had them, and in 1957, 96 per cent had them. In one school studied this year, only one child did not have a TV set at home.

In 1950 many people believed that televiewing would prove a passing fancy—especially for children—and that the amount of time given to it would drop sharply after its novelty wore off. This proved unrealistic. Children spend as much or more time watching TV now than they did at first. In 1950 elementary school children averaged 21 hours a week watching TV; in 1951 the average dropped to 19 hours, but it went up later with the appearance of new and more appealing programs. High school students devote less time to TV; the average in 1957 was 12 hours a week.

The Northwestern studies show that TV is not having the predicted bad effect on children's health. In 1950 parents reported that children slept less, played less, and were more nervous and disturbed. But as the years have gone by, fewer and fewer parents voice these complaints, apparently because they are trying to arrange proper conditions for televiewing and are encouraging rest periods and changes in activities.

While children's interests and hobbies have changed slightly since 1950, their outdoor recreation has not changed much, the studies have shown.

Emotion and nervous problems appear to be diminishing. When children who spend an extremely large amount of time watching TV have emotional difficulties, teachers have found in every case other factors, such as poor home or unfavorable environment.

Television appears to have a conflicting effect on school work and grades. There seems to be little relationship between grades, and time spent watching television, although excessive watching appears to be associated with somewhat lower grades. However, one teacher remarked, "Good students tend to remain good; poor students stay bad."

Television may serve as a way of learning or as an incentive to learn more about a particular subject. Children who think TV helps their school work mention its value in improving vocabulary and knowledge of history, current events, science, people at home and around the world, and books. Librarians report that children are reading "more than ever," which indicates that television has not cut reading.

Witty urged parents and teachers to work for better programs, to give children the guidance and encouragement they need to derive the greatest benefit from their "newest and best-loved recreation," and to remember that television is "a problem only in homes in which it is permitted to become a problem."

The State Board of Health

J. D. HAGOOD, M.D.
Clover, Virginia

BEFORE we take up the regular order of business, I wish to refer briefly to a subject of much importance to the people of Virginia, as a whole, and to the medical profession in particular. I have in mind the State Board of Health and the fine work it is doing in the field of public health in Virginia. I feel that a few words of appreciation at this time would not be inappropriate.

As Chairman of the Senate Finance Committee and member of the Governor's Advisory Board on the Budget, I have necessarily been a participant in the hearings on the budget estimates of the State Board of Health, and in the discussion of the appropriations provided for public health work, in Committee and on the floor of the Senate. The State Board of Health has been well represented in these proceedings. It has asked for and has gotten big increases, though not all that has been requested. Public health is now exceeded in the amount of its appropriations from the general fund of the State treasury only by Education, Mental Hygiene, and the Department of Public Welfare.

These large appropriations become more impressive when we reflect on the unique distinction possessed by the State Board of Health, of having operated for about the first thirty years of its existence with no support at all from the State treasury. This somewhat inauspicious start of its career began with an act of the General Assembly of 1871 creating a State Board of Health. The legislative approach to the matter at that time was notable for an apparent desire to develop an effective public health program without spending any State money. The Board was charged with various duties of more or less importance. It was directed, among other things, to make sanitary investigations and inquiries respecting the causes of disease, especially of epidemics and endemics, the sources of mortality among the whites and blacks, and the effects of the localities' employment conditions and circumstances on the public health, to act as an advisory board to the State in all hygienic and medical matters, and among other things, to examine into and report what in their best judgment is the effect of the use of intoxicating liquor as a beverage upon the industry, happiness, health and lives of the citizens of the State.

The Board was required to meet at the Capitol of the State at least once in every three months. It was directed to appoint from their own number a president and permanent secretary, the latter to reside in the Capitol and to be their executive officer. In the final paragraph of this act it was provided "that the State Board of Health shall not in any way be a charge on the State."

With this cautious beginning the newly created Board was left to go its way, apparently without further financial help by the General Assembly, for the next twenty-eight years, or until about 1900.

In an act approved March 7, 1900, $5,000 was appropriated for each year of the next two years, but the act was later declared unconstitutional. Another attempt with more success was made in 1903. At that time an act was passed appropriating $8,000 for expenditure at a rate not exceeding $4,000 a year for each of the next two years. With this enactment the State Board of Health was for the first time given some financial support by the General Assembly.

Evidently impressed with the results obtained with this first appropriation, the General Assembly in 1908 made certain changes in the membership of the State Board and created the offices of State Health Commissioner and Assistant Commissioner. The Commissioner appointed under this act was apparently successful in persuading the General Assembly that a need existed for a more comprehensive public health program. In 1910 the annual appropriation was increased to $40,000, and a start was made on the construction of sanatoria for the treatment of tuberculosis.

Since then periodic increases in appropriations for public health purposes have been made practically as a matter of course.

Beginning with the grant of $40,000 in 1910, these appropriations, from the general fund of the State Treasury, for Public Health have since increased—

For the year ended:

Presented before the Annual Health Conference, Roanoke, May 15, 1957.

February 28, 1920 to		$ 290,700
	1930 to	$ 564,005
June 30th—		
	1931 to	$ 628,695
	1940 to	$ 954,660
	1950 to	$5,515,698
	1956 to	$9,485,873

In addition to State funds, our public health work is receiving the benefit of increasingly large appropriations by the counties and cities. Beginning with the fiscal year 1931 these county appropriations have been as follows:

1931	$ 181,748
1940	$ 252,974
1950	$ 610,841
1956	$ 1,088,737

With the addition of these county funds, the totals for public health are increased for—

1931 to	$ 810,443
1940 to	$ 1,207,634
1950 to	$ 6,126,539
1956 to	$10,574,610

Some of you would perhaps like to know what these big appropriations are used for mainly. I will quote some figures from the State appropriations made for the year ending June 30, 1958. One of the larger items is a general fund appropriation for local health services of $2,531,989. This money is supplemented by local and Federal funds and is largely spent in maintaining local health units. All of the State's 98 counties are now organized in this cooperative county health work.

Another and still larger item is an appropriation of $3,518,755 for prevention and cure of tuberculosis. Of this amount, $2,705,350 is spent for the operation of the three State sanatoria for tubercular patients at Catawba, Charlottesville, and Burkeville, and $813,400 for surgical treatment of tuberculosis and for aid to local tuberculosis sanatoria.

In addition to these items, $901,530 is appropriated to the State Board of Health for tuberculosis diagnosis, surgery, and hospitalization at the Ennion G. Williams Hospital, Medical College of Virginia, for the treatment of Negro patients. With this new unit, the patient capacity of the hospital is increased by 248 beds for tubercular patients and 195 general hospital beds.

With the added space at the Ennion G. Williams Hospital, beds are now available for 825 white patients at Blue Ridge and Catawba and for 618 Negro patients at Burkeville and Richmond. Approximately 40 beds at Blue Ridge and 185 beds at Catawba are vacant at present. No need seems to exist for further additions to the State tubercular sanatoria facilities.

Relatively large appropriations are made for such purposes as collection and publication of vital statistics, sanitary engineering, shell fish inspection and sanitation, malaria and mosquito control, inspection of hotels, tourist and food establishments, maternal and child health, crippled children's service, operation of laboratories, study, care, treatment, and rehabilitation of alcoholics, and post-mortem examinations. The listing of all public health appropriations includes 30 separate items and requires more than three pages in the Appropriation Act as compared with about two lines as late as the Act of 1906.

Our State Health department, I believe, ranks among the best in the country. I feel that we are getting good results for the money we are spending on it.

Wintertime Fun

How to live sensibly and still have a good time in cold weather is the way of life outlined in a new series of radio transcriptions the AMA's Bureau of Health Education will have available for use by medical societies early in December. In the 13-program series "The Picture of Health," brief dramatizations of typical family life are presented—illustrating how far open the bedroom window should be at night or the kinds of food one should eat to stay healthy. Other subjects covered in the series include: general winter exposures; snow and ice hazards for pedestrians; frostbite and chilblains; skiing hazards; diet; driving; household procedures (such as temperature and moisture in the room). Dr. W. W. Bolton, Bureau associate director, serves as medical consultant.

Dr. Stuart McGuire's Contribution to Medical Education

JOHN BELL WILLIAMS
Richmond, Virginia

MY INTRODUCTION to Dr. Stuart McGuire came at Camp Lee during World War I. As I walked across the compound he turned to Dr. Garnett Nelson and asked, "Who is that?" Dr. Nelson replied, "That's one of your men, John Bell." "Good God," said Dr. McGuire, "he looks worse than I do and will be dead with tuberculosis in less than six months." It is needless to add my pleasure in being with you tonight.

While being read to by his mother, the child Stuart McGuire became familiar with the classics before he could read or write. The result was that this inspiration was never tarnished by life's misfortunes nor inhibited by conventional education.

It would be as futile to attempt a word-picture of even one phase of Dr. Stuart McGuire's life as it would be for a modern artist to reproduce the subtleties of Mona Lisa. The temptation is to begin with his distinguished family background, to elaborate upon the serious physical afflictions which were his from earliest childhood, or to dwell upon his remarkable powers of perception, his charm, his wisdom, and such like qualities that set him apart from other men. But, since my remarks must be limited to his most outstanding contributions to medical education, let it be said of the man only that he was born with handicaps that would have excused a life of complete invalidism, and that by a noble and proud self-discipline, he became a leader among leaders of men.

During Dr. McGuire's early years at the University College of Medicine, faculty meetings were a mixture of education, politics, and competition for position and for patients—a system under which, with all its faults, each teacher sustained public interest in the College, as incidental to his private aims. In discussions of minor importance, Dr. McGuire never joined debate; indeed, when deferred to, he seemed to have suffered a loss of memory. Should such argument take an important turn, however, it was his striking characteristic to reach into the air, as it were, to bring down and crystallize all the essential facts of the controversy, and to state his own views with such devastating clarity as to disarm the opposition. In this, he displayed a revival of memory which enabled him to cite every development in the affair, going back years, if necessary, to point out facts of time, place and circumstance. Like Moses, he knew which mountain to climb. He never called for a survey. Committees were useful to raise money, delay action, or to kill a motion. His ability to say much in a few words is illustrated by a routine case history of his in 1906: "Miss W.K. age 17, typical appendicitis; usual operation; result: cured; fee $50.00. Note: cancel charge, no money."

In those days few students had been to an academic college. High schools had taught them Latin, a foreign language, English sufficient to write a grammatical sentence, and enough mathematics to solve such problems as they were likely to encounter. They had no instruction in the sciences. Despite this, and despite the fact that teachers were busy practitioners, the University College of Medicine turned out such men as Dr. James H. Smith, Dr. William Branch Porter, Dr. Joseph Geisinger, Dr. E. Guy Hopkins, Dr. Thomas W. Murrell, Dr. J. Garnett Nelson, Dr. W. Lowndes Peple, Dr. Alexander Brown, Jr., and a host of like calibre. These men, with an earlier and a similar group trained at the Medical College of Virginia, raised Richmond from the ashes of the ruined Capital of the Confederacy to the outstanding medical center on the Atlantic seaboard south of the prosperous cities of the gilded North.

Upon the death of Dr. Hunter Holmes McGuire, Surgeon to "Stonewall" Jackson, a long and bitter fight preceded the election to the chair of surgery. One candidate was an established surgeon; the other, a rising son, was young Stuart McGuire. But after the young doctor won by a small majority, the acumen inherent in his genius was apparent. Dr. McGuire immediately moved that, for the sake of harmony, the faculty reconsider its decision and elect both candidates; and this being done, there followed a rapid turn of events in his own career, as well as that of the College. Soon young Stuart McGuire had

Presented at the Opening of the Twenty-Ninth Annual Stuart McGuire Lecture Series at the Medical College of Virginia, on Wednesday, November 13, 1957.

the backing of both factions and was the sole professor of surgery; he later became Dean of the School, President of the College, and eventually Chairman of its Board of Visitors.

From the beginning of his career, Dr. McGuire emphasized his conviction that the basis of medical teaching should be pathology. Hence his lectures dealt primarily with the principles of surgery rather than technique. His operative clinics, however, drew students from all classes, and doctors from many states gathered to hear his brilliant reviews leading to diagnosis and to watch his long slender fingers moving with swift yet tender skill.

In administrative affairs, Dr. McGuire had the gift of a true leader for outlining basic objectives only, while resting responsibility on his subordinates. Results he inspired—methods he left to others. There were times when the habit of delegating responsibility rebounded upon Dr. McGuire, as once when he referred a patient to a somewhat self-important young man. This youngster, a physician anxious of acclaim, rushed excitedly into the famous surgeon's office every hour or so to report each step of progress with the case; and twice Dr. McGuire, though extremely busy, made comment with characteristic courtesy. But the third time his office door popped unceremoniously open, he responded with the sharp decisiveness which was also his characteristic: "Look here, boy, I sent that old woman to you to get rid of her! Now I've got both of you on my hands."

When the University College of Medicine burned to the ground, Dr. McGuire called upon his friends and together they raised funds for immediate rebuilding. The land upon which Hunton Hall now stands was afterwards purchased by Dr. McGuire and Mr. J. R. McCauley and held for the College until repayment at cost could be arranged. When the Retreat for the Sick Hospital moved uptown Dr. McGuire foresaw that the College would need its former site, which he personally purchased. This lot, now occupied by the out-patient clinic, was held by Stuart McGuire for years until the College was able to repay him at the original price.

At no time did Dr. McGuire show more foresight or largeness of spirit than when he, joined by the eminent Dr. George Ben Johnston, combined the College his own father had founded with its rival the Medical College of Virginia for the advancement of medical education in Richmond.

The consolidated schools closed Virginia Hospital. The need of beds for colored patients was soon apparent, as was also the need of more patients for teaching purposes. Thus Dr. McGuire became a leader in the campaign to build St. Philip Hospital for Negroes. Thereupon, having called on a public-spirited citizen for a donation, he was surprised to be refused a single penny because, the public-spirited gentleman said, his servants had just stolen his wife's silver. When pressed, however, he asked if there were other needs, and Dr. McGuire made haste to stress the lack of facilities for treating contagious disease. So St. Philip was built without that particular gentleman's help; but Dooley Hospital, now filled with colored patients, perpetuates his name.

Dr. McGuire's absence in France during World War I in no wise decreased his zeal for improving medical education in Virginia. His first move, after reopening his own hospital, was to lead a state-wide campaign to consolidate the Medical Department of the University of Virginia and the Medical College of Virginia. His primary contention was that neither school received sufficient state support to be outstanding, while their combined appropriation would equip one first-class institution worthy of the State. To his intimates, he explained that no effort should be spared to win this program in the General Assembly, but that the campaign would not be lost if the effort failed. For, he said, in losing this skirmish, medical education would win a battle, as the Assembly, thereby, must recognize their responsibility for improving both schools of medicine.

Next, he determined to resign his post as president, advocating the appointment of a full-time president of the Medical College of Virginia. The new president, he said, should be "an organizer, an advertiser, and a beggar," whereupon, a facetious student remarked, "We now have an organizer, advertiser, politician, and surgeon. Why make a change?" However, at the recommendation of Dean Wortley F. Rudd, Dr. McGuire endorsed the election of Dr. William T. Sanger, a move he always regarded with satisfaction; and it was then that he began the third phase of his career as Chairman of the Board.

When the Richmond Academy of Medicine was considering building a home, Dr. McGuire made a generous donation in order to influence its location within the College area. Upon the suggestion of Dr. R. L. Simpson, he asked Mr. William T. Reed and Mr. Eppa Hunton, Jr. to join him in persuading the childless Dr. Judd B. Wood and his wife of the great benefactions made possible through legacies to the College. It was through their persuasiveness in this case that the Wood bequest, among other important developments, brought the splendid Medical

College Hospital building into being. It was also from Dr. McGuire's having convinced his friends Mr. and Mrs. A. D. Williams of the rewarding opportunity, during their own lifetime, of matching Federal funds with personal generosity that the new out-patient building was erected. This, during the depression when so many worthy people were in need of work, was effected on Dr. McGuire's promise that a certain carpenter, a friend of the Williamses, would have steady employment till the building was complete. Beginning with this rewarding experience, Mr. and Mrs. Williams were later moved to bequeath a large endowment to the College.

These were but instances of a life which, from childhood to the incredible age of 81, was unceasingly devoted to medicine and medical education. To the end Dr. McGuire continued to urge upon his friends the importance of donations and bequests to medical education; and he kept the faith himself in a will under which the remainder of his own estate, after payment of legacies and provision for his wife, will eventually go to teach young doctors. It is to honor him that these lectures were established by Dr. Sanger.

His faults were faults of the aristocrat. His intellectual energies were channelled, consistent, and unswerving; his valiant spirit, disciplined and courageous, transcended all material and physical barriers. It belonged to the ages. Here was a truly great man.

1000 West Grace Street
Richmond, Virginia

Teach Child To Make Friends

The best time and place for learning how to make and keep friends is in childhood and at home, according to an article in the November Today's Health. Elizabeth B. Hurlock, Ph.D., outlined in the American Medical Association's popular health magazine some tips for parents on how they can help their children learn to make friends. If good foundations for getting along with others are laid in the home, a child's chances for being popular are greatly increased.

Some of her suggestions to parents are:

—Set a good example for social relationships in the family, since children quickly imitate patterns of behavior they observe around them.

—Supervise a child's early play with his brothers and sisters and with the neighborhood children. Show him how to get along with others and explain why a particular behavior is good or bad.

—As he grows older, discuss as a family what makes certain children popular and others unpopular. This should be kept on an impersonal level.

—Encourage him to bring his friends home and help him learn how to entertain.

—Watch for the first signs of jealousy toward a brother or sister and correct the cause before it becomes a habit.

—Play games with a child, so he can learn how. Since most contacts with other children will be in play, he must be able to play as well as they do if he is to be included in the group.

—Give him an opportunity to talk when the family is together and help him to talk about things that are interesting to others.

—Call on him for help. Children who develop the habit of helping at home rarely sit back and expect others to do all the work, nor do they grumble because they feel they are expected to do more than their share.

—Expect him to consider the interests and desires of the family. Teach him to laugh at himself. And make sure the home is a cheerful place. Being cheerful will become a habit and this goes a long way toward making anyone popular.

Dr. Hurlock is former secretary-treasurer of the American Psychological Association's division on childhood and adolescence.

The Health Insurance Council's Uniform Forms Program

RICHARD J. EALES
New York, New York

THE EDITORIAL entitled "Forms, Forms, Forms" which appeared in the October 1957 issue of the Virginia Medical Monthly stated very precisely many physicians' attitudes toward insurance claim forms. The insurance business is cognizant of the problem claim forms are creating for the medical profession and the Health Insurance Council* has taken positive action to solve it. Considerable progress has been achieved in this direction.

Only a few years ago, voluntary health insurance was virtually unknown. The lack of protection against the costs of medical and hospital care was one of the main arguments being used by the social planners to promote government health plans. Also, the expense of medical care and the fact that a large segment of the country's population had no means of cushioning its financial impact, inhibited many people from obtaining timely and adequate health care.

The tremendous growth of health insurance has materially weakened the case for a compulsory prepayment scheme. Today some 118 million persons are protected against the cost of medical care through voluntary health insurance programs. This means that over 70 per cent of the total U.S. civilian population is covered by voluntary health insurance.

Furthermore, it is estimated that more than $3 billion of the nation's health care bill will be paid in 1957 through voluntary programs, with over $2 billion in benefits paid by the insurance companies alone. Thus an increasingly high percentage of physicians' services are being financed through insurance arrangements—insurance companies in 1956 paid $466,000,000 in reimbursement services.

Just as the proportion of medical services financed by insurance dollars grows, however, so too does the volume of paperwork required in making benefit payments.

Most physicians know that an insurance contract requires the insured person to provide adequate proof of loss. They also know that seldom can the insureds fulfill this obligation without the help of experts—in the case of health insurance—physicians. They do believe, however, that this assistance they render their patients could be accomplished without being such a burden. In this, the Health Insurance Council concurs. The Council has recognized that the rapid growth of insurance protection against illness and injury has begotten many different forms containing a variety of questions, many of which are unnecessary. Others are vague and ambiguous.

Having arrived at this unequivocal position, it would seem that the solution to the problem would be simple. Far from it.

A special committee appointed by the Council, comprising experts in claims administration, has labored long and hard. The details of its toil need not be recited here; suffice to say that many studies, surveys and experimentations were made in an effort to achieve an end product which would be acceptable to the medical profession, and at the same time adequately serve some eight hundred companies having widely differing types of business and administrative practices.

At length, however, two lists of questions were developed, one for group insurance and one for individual policy claim reports. The questions, only fourteen in number, are deemed to be all that are necessary for the numerous types of health insurance policies that exist. These include surgical, medical, temporary loss-of-income, and permanent and total disability policies as well as specialized coverages such as contracts covering diagnostic services.

Much effort was expended in the development of the questions' wording. In each instance, that wording was chosen which the committee believed would elicit the information required in the simplest and most precise way compatible with the needs of all companies. The order of the questions' appearance on forms, when used, was also established so that as much uniformity as possible would be achieved.

RICHARD S. EALES, *Assistant Director of Health Insurance, Life Insurance Association of America.*

*The Health Insurance Council represents the nation's insurance companies in providing information and technical assistance to the medical and hospital professions on all aspects of voluntary health insurance. The Council has been serving the health care field since 1946.

Prior to their release to the companies, the standardized attending physician's statements were considered in detail by the Committee on Prepayment Medical and Hospital Service of the American Medical Association's Council on Medical Services and approved subject to certain revisions which were made. Official endorsement of the forms was then given by the House of Delegates of the American Medical Association.

The two lists of questions have been termed "all-purpose" forms (GD-1 and ID-1) because they can be adopted in toto and used in connection with all types of policies. Most companies, however, are developing two or three "standard" forms for their different coverages by using those of the standard questions needed in each case. The purpose of this is to further simplify completion of forms by deleting unnecessary questions.

To sum up, three principles underlie the simplified claim forms program:

1. Insurance companies are asked to use only the approved questions but they need not use those which elicit information not required.
2. The wording of the questions must not vary except by omission of unnecessary phrases.
3. The order of the questions must remain the same as on the standard all-purpose forms.

As can be seen, there will be some variation in the number of questions used and in the actual design of the companies' "standard" forms. In short, the questions, not the forms, are standardized.

Participation in the claim forms program by all companies in the health insurance business is now the Health Insurance Council's objective. Considerable effort is being expended toward its achievement. This aim cannot become a "fait accompli" overnight; nevertheless, a recent survey showed that companies having over three-quarters of the total health insurance business in force throughout the nation had adopted and were using standard forms, or were preparing to change over.

Obviously, we would like to say that your claim form problem will be finally and perfectly solved tomorrow, but all good things come slowly. The insurance business recognizes that the multiplicity and complexity of claim forms must be eradicated—and is confident that it can and will be done.

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488 Madison Avenue
New York, New York

Warfarin

A new synthetic drug, Warfarin (Coumadin) sodium, comes closer to being an "ideal" anticoagulant than any other drug now available, two groups of researchers report. Anticoagulant drugs are used to prevent death-dealing blood clots in heart attacks and some kinds of circulatory diseases by depressing the blood's ability to clot. Warfarin has a faster and more-lasting effect and produces fewer harmful side effects than other anticoagulants, the two groups reported in separate articles in the November 16 Journal of the American Medical Association.

Warfarin is unique because it is effective when given orally, intravenously, intramuscularly, or rectally, according to Drs. Shepard Shapiro and Flavio E. Ciferri, New York City. Other anticoagulants are effective only when given orally. The fact that it is effective when given by injection is especially important for those persons who cannot swallow pills because of heavy sedation, shock, nausea and vomiting, or other reasons.

Drs. Shapiro and Ciferri found that a single muscular injection provided an effect that lasted for as long as five days, with the peak effect on the second or third day after injection.

Drs. Rudolph E. Fremont and Benjamin Jagendorf, Brooklyn, N.Y., gave the drug in tablet form to 85 patients at Brooklyn Veterans Administration Hospital. The patients had suffered heart attacks or blood clots in the vessels. They found that Warfarin produced a fairly prompt reaction in the patients, as well as "relatively well-predictable and consistent" effects for longer periods of time. They found little need to manipulate the dosage after the initial need was established in the patient.

Warfarin rarely caused excessive depression of the ability of the blood to clot, with resultant hemorrhage—one of the problems encountered in some of the other anticoagulants. Excessive depression was quickly counteracted by administration of vitamin K.

The authors also pointed out that Warfarin does not produce any known harmful effects on the body.

Mental Health . . . .

W. I. PRICHARD, M.D.

New Petersburg Training School

The expanded program now under way for the new institution for the mentally deficient at Petersburg gives realization to the dreams of Dr. Hugh Henry, former Superintendent of Central State Hospital and the first Commissioner of the Department of Mental Hygiene and Hospitals.

In August 1932, Dr. Henry secured from the Legislature funds to purchase the Seward Farm and adjacent land in Prince George County just south of Petersburg. Total acreage was 1,019. The dairy herd and the farm of Central State Hospital were operated there until March 12, 1938, when the Legislature by statute created the Petersburg State Colony for high grade feeble-minded Negroes.

The Colony opened January 1, 1939, for males, and a year later for females. The early years were difficult for the war took away employees and replacements were hard to secure. However, a comprehensive training program was nevertheless installed which was later to serve as a model for the Lynchburg institution. The Colony known as "Evergreen Training School" had 250 to 300 patients.

In the late '40s and early '50s plans for expansion of this institution were already underway. The growing necessity to separate the low grade mental defectives from the adult insane at Central State Hospital also was becoming urgent. But, the lack of adequate water supply at the present site and difficulty in sewage disposal forced the State Hospital Board to abandon the location as the place for expansion. In 1953, an act of Legislature changed the official name to The Petersburg Training School and Hospital, and the search for a better site continued. Many locations in Southeast Virginia were inspected, but some factors arose to complicate each choice. After the war the Elko site of 2,300 acres near Sandston was secured at bargain price from the United States Government. This was recently rejected in favor of a location adjacent to the Central State Hospital. Petersburg was favored over Elko because it is in the vicinity of Virginia State College where courses in special education, psychology, etc., are given. The interest now in the mentally defective centers on training in its broadest sense.

Plans for the creation of this new training school have now rapidly developed to the point of actual construction. Site grading has been done and actual construction is in progress as this is being written. Contracts for construction were let in November, 1957.

The architects have been urged to complete drawings of all units so that all construction, including that of four dormitories for lower grade mental deficient patients, can be under way during 1958.

The institution, now under construction, is being built on two tracts of land near the Central State Hospital. It will eventually replace the present Petersburg Training School and Hospital. The functions of these two new units are in direct contrast—one active training—the other, custodial care. The present plant is inadequate. Its future use when abandoned has not been determined.

The 80 acre site for the high grade trainable patients will be located in front of Central State Hospital across Highway 460. The site for the low grade or custodial unit (consisting of 50 acres) will be located at the southwest corner of Central State Hospital property near the intersection of U.S. Route 1 and the Richmond-Petersburg Turnpike. For the custodial group, four cottages will be built initially with a total capacity of 432 beds.

The two new units described above will be built at a total estimated cost of $2,625,745.00. Four cottages with a total of 360 beds—$1,142,400.00; kitchen-dining room building—$351,090.00; classroom, administration, gymnasium building—$742,800.00; utilities, road and walks will take the balance.

Construction (initially planned only for the higher grade patients for the present) will consist of sections of the school building for academic and for vocational training, the kitchen and general dining room, and for two male and two female cottages. Equipment for academic classrooms and for vocational training is included in the plans. The general dining room will serve food cafeteria style.

The trainable patient buildings are one-story,

W. I. PRICHARD, M.D., *Superintendent, of the new Petersburg Training School at the new location.*

Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

T-shaped, with three wards. Each ward provides space for 30 patients. Thus each building will house 90 patients, a total of 180 males plus 180 females. The buildings are permanent type and fireproof. The buildings for the higher grades of mental defective patients are 100 feet apart at the nearest point. The male buildings are on one side of the plot and the female buildings on the opposite side with a large center area providing ample recreation space.

There are definite advantages in the present location. Services now existing at Central State Hospital such as medical, maintenance of buildings and grounds, water supply, sewage disposal and attendant training programs, etc., can be utilized. Being immediately on two main state highways, the new location is readily accessible east, west, north and south. Also, the new training school is very accessible to the area of largest Negro population in the State.

Over all funds totaling $5,000,000.00 have already been appropriated by the General Assembly for construction. The actual cost of this new institution in Petersburg is estimated at $4,916,500.00. The balance will be available for future expansion of the institution.

During the past fifteen years, greater and greater interest has developed concerning the welfare of the mentally handicapped or retarded child, Negro and white. Society is no longer indifferent to their lot. They are no longer left in an institution to deteriorate and be a total expense to the State for their natural lives, nor should they be left in the community to become delinquent. Community, State and Federal programs are expanding to meet the needs.

Virginia is abreast of modern concepts. The Department of Mental Hygiene and Hospitals is trying to salvage the capacities the mentally retarded have, to return many to society, and to assist those remaining in the institution to use themselves constructively. This training enables the patient not only to make a contribution to the institution but to acquire for himself a sense of well-being.

Smith, Kline & French Foundation

The Smith, Kline & French Foundation, independent philanthropic arm of Smith, Kline & French Laboratories, has reported in detail its disbursement of $1,457,876 in the first four years of its history.

Basic research in medicine and related sciences received the largest portion of the funds—$673,910 for projects unrelated to the Philadelphia pharmaceutical firm's commercial research interests. Next in order were educational grants, public charities and community improvement, mental health, and building and equipment funds.

Grants for Virginia amounted to $15,400. A grant of $8000 was made to the Cardiovascular Laboratory of the Medical College of Virginia to support a research fellow in the field of pulmonary (lung) function. The University of Virginia School of Medicine has received a total of $7400. Dr. William Parson received a $4000 grant in support of research involving the study of experimental obesity in mice. A grant of $3400 was made to Dr. Eugene D. Brand to acquire equipment necessary to extend his research work in the fields of neuropharmacology and neurophysiology.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Changing Aspects of Communicable Disease Control

Concepts of communicable diseases have varied from time to time depending on the thoughts and interpretations prevailing at the time. Such concepts have been closely associated with man's religion and with his observations on the occurrence of disease in connection with certain physical states of environment.

The most primitive man recognized both a good deity and an evil spirit associated with his everyday life. Both had their influence on human affairs and to the latter was attributed the unfavorable happenings. When plague and pestilence struck, involving large numbers and killing many, his reasoning was that an evil spirit was taking this means of destroying his people. If the disease involved only one person, the individual was believed to be under the spell of the devil; if there was an epidemic, it was evident that this spirit was wreaking his vengeance on the tribe. In either case the remedy was the same —driving out the devil or appeasing the evil spirit. The execution of the control measure was entrusted to the religious officer of the tribe and thus evolved the association between the priest and the medicine man.

As man's religion progressed to a higher stage he transferred responsibility from the evil spirit to the good spirit and developed the belief that disease was a punishment for sin. The remedy was the same; through the religious officer, man sought to make appeasement as prescribed by his religious rituals.

Such explanations of the cause of disease persisted into the Middle Ages when epidemics of plague, smallpox, and cholera were described as punishments for sins. In Colonial times, Cotton Mather preached that smallpox, then raging, was the avenging whip of God, but in the next breath urged vaccination. Today we find persons who sincerely believe that spiritual forces rather than infectious agents condition the development of epidemic diseases.

A philosophy of physical forces as the cause of spread of disease developed long before the discard of religious theories. One of the first variables studied carefully was the motion of stars and planets and all happenings on earth were ascribed to the relative position of the heavenly bodies. These notions may seem wild today but they exerted great influence over people of the times.

Association of the disease with season, climate, temperature, moisture, overcrowding, and filth was the background of development of the theory of toxic miasmata and vapors. Observations contained elements of truth though the theory was unsound. According to this theory disease was caused by poisonous substances that rose from the earth and were spread by the winds. Those living near swamps were affected with fevers thought to be due to poisonous gases from the marshes. The surrounding air was made bad and the fever became known as *malaria* (bad air). It was not until the end of the 19th century that the role of the mosquito in the spread of malaria was recognized.

In conditions of overcrowding and filth the spread of disease was attributed to toxic emanations from decay and the fact of transmission of infection from person to person was overlooked. Diphtheria was attributed to sewer gas, typhoid to decaying filth and later to emanations from defective house drains. Remedies for control were built on these theories. Cannons were fired and huge fires were lit to prevent polluted air. Fumigation was used to purify air where disease had occurred.

Boards of Health were first instituted to control communicable diseases and it is interesting to remember that the first Board of Health was established in Petersburg, Virginia, in 1784. Some boards

were empowered to regulate "dangerous and noisome odors" and many were instructed to control "sources of filth and causes of disease". Nuisance regulating powers (such as weed-cutting ordinances) vested in boards of health today are vestiges of this doctrine of relationship between decay and filth and disease. While this theory offered an incorrect explanation of the true origin of communicable diseases, it was the foundation of modern health departments and without it sanitation, municipal cleanliness, and public health might have been retarded.

Our knowledge of bacteriology dates from comparatively recent times and the discovery of the microscope was an important event in its development. In 1676, van Leeuwenhoek, in Holland, showed the existence of microscopic forms of life and there followed the suggestion that these might be of pathogenic significance. The investigations of Pasteur in the latter half of the 19th century may be considered as the beginning of the modern bacteriological era. Pasteur proved beyond doubt that certain diseases are due to microscopic forms of life. He was able to reproduce them outside the body and to transfer them to animals and produce disease. He showed that these bacteria did not arise spontaneously from decaying vegetable and animal matter but were in all instances the offspring of preexisting bacteria of the same character. To some it seemed fantastic that such minute objects could produce disease in man. The idea of healthy carriers had not been advanced and there were apparent inconsistencies in rejecting the idea of spontaneous generation to accept the idea of bacteria as the causes of disease. By the end of the 19th century the germ concept of disease was firmly established.

The bacteriological explanation developed new ideas of disease controls. Segregation to avoid dissemination, even to completely control and eradicate the disease, was prescribed. Isolation and quarantine were thought to be ideal measures. Fumigation and disinfection were practiced with ardor in the hope of destroying germs as they passed from host to victim. Attention was devoted to inanimate objects as vectors of specific infection and it was after the turn of the century that consideration was given to human beings as primary sources. The discovery of carriers showed the greater importance of persons than of things as spreaders of disease. The role of insect vectors was discovered and the recognition of animals as sources of spread of certain diseases in man has clarified many problems.

Bacteriology introduced not only a new concept of origin and mode of spread of infectious diseases but also a new era of prevention through specific control measures and artificial immunization. Prevention of disease through inoculation of vaccines, anti-sera, and toxoids is familiar to all. Treatment through use of bacteriostatic and bacteriocidal drugs, antibiotics, and antitoxins is an every day job.

Research during the last war provided new weapons of communicable disease control far superior to those previously possessed. Consider the advent of penicillin, DDT, new antimalarials, and new antigens. The value of many that we had was proved through severe field tests—the sulfonamides, tetanus toxoid, typhus and yellow fever vaccines.

The fight goes on. Knowledge of the mutations of bacteria has been gained and will increase. More and more is being learned about viruses; recognition of them and fight against them will proceed as it has in the present invasion of Asian influenza. Study and prevention of diseases transmissible to man from animals are progressing. New and specific antibiotics are being developed. Vaccines, as poliomyelitis vaccine, are bringing hitherto uncontrollable diseases into the realm of preventability. Through bacteriology, virology, and immunology, communicable diseases will eventually be forced to yield in importance to other branches of medicine.

Monthly Report of Bureau of Communicable Disease Control

	Nov. 1957	Nov. 1956	Jan.-Nov. 1957	Jan.-Nov. 1956
Brucellosis	1	2	22	31
Diphtheria	3	4	20	30
Hepatitis	20	33	410	451
Measles	166	126	5013	23713
Meningococcal Infections	12	7	71	85
Meningitis (Other)	16	16	404	148
Poliomyelitis	6	17	102	220
Rabies (In Animals)	27	15	302	277
Rocky Mt. Spotted Fever	1	1	31	52
Streptococcal Infections	941	355	6394	5325
Tularemia	5	1	31	20
Typhoid Fever	3	0	42	57

Pre-Paid Medical Care . . . .

Edited by
RICHARD J. ACKART, M.D.

Why the Plans Investigate Cases

During the past year the Blue Cross-Blue Shield Plans here in Virginia received a few letters from physicians who wrote critically of the investigations that are conducted by the Plans whenever the necessity of hospital admission is not self-evident. One of the physicians stated that he could remember back to the time when the Plans actually urged Subscribers to use their pre-paid benefits, and that the Plans' current practice of looking into the reasons for hospitalization seemed to him to constitute a rather illogical change of policy.

To be sure, over the years the Plans' administrative policies and practices have been subject to constant review and to frequent revision. How else could the Plans remain *au courant* with medical practice? But all changes made, if not universally understandable, have at least been consistent with the Plans' original motivating idealism. Motivations have not changed. It is still Blue Cross-Blue Shield's goal to help solve the medical-economic problems of low-income folks. It is still Blue Cross-Blue Shield's goal to provide for as complete "coverage" as possible for members who need hospital care. Each year the Plans take another forward step toward those goals, and it is to make possible even further progress that administrative policies and practices are sometimes changed.

For example, twenty years ago when Blue Cross-Blue Shield was getting underway, folks went to the hospital too infrequently—oftentimes too late. Their reluctance was due, in large part, to the difficulties of paying for the expenses involved. Blue Cross-Blue Shield stepped into the picture with a unique mechanism through which needed services could be pre-paid for, in easy-to-meet installments, and through which a "spread-the-risk" or insurance factor could be utilized to permit a combination of low pre-payment rates and comprehensive coverage. Nonetheless, folks' habits and thinking did not change abruptly; their reluctance to use medical-care services continued. In order that Blue Cross-Blue Shield might do the public health job for which it was established, it was necessary that Plan representatives encourage Subscribers to use the services they had pre-paid for. This was not promotion of over-use; it was health-education designed to increase utilization from a too-low level to an optimum level.

In an article to be read by physicians it would be redundant to describe the change in the public's attitude concerning health services that has come about during the past twenty years, nor is there need to list the many interrelated reasons for that change. Suffice to say that, one thing leading to another, the pendulum has swung a bit too far the other way, so that now all too many patients—and all too many younger doctors—are conditioned to the attitude that occupancy of a hospital bed is the first step toward care of any illness, no matter how minor; that hospital admission is prerequisite to establishment of a diagnosis; that entering a hospital is a way of getting care paid for; that a hospital stay is justified only because of its convenience.

A vicious cycle has developed. Unnecessary hospitalization creates a false demand for more hospital beds; more beds predispose more unnecessary admissions—just to keep the beds full. The folks who are improperly using hospital beds (which cost $20,000 each to construct) would never do so if they had to pay directly out of their own pockets the $19.00 daily cost of maintaining one of those beds. They do not realize that they are, nonetheless, paying that cost and contributing toward the construction of yet more beds (to be used unnecessarily). On the other hand, they are appalled at the size of the nation's overall health-care expenditure—and some of them are thinking maybe government should step in and take care of a situation that voluntary effort and self-discipline seemingly are unable to control.

Thus, Blue Cross-Blue Shield has adopted another motivation; namely, to help save our voluntary scheme of things by contractually providing for only necessary usage of expensive in-hospital facilities. The Plans do not want to be party to wastage of medical-care dollars, the number of which is not unlimited. Accordingly, the Plans have written into their Contracts specific provisions to exclude coverage of expensive in-patient care *in those cases which can satisfactorily be handled on an ambula-*

tory-patient or home-care basis. By eschewing liability for the expenses involved in such cases, the prepayment rates charged by the Plans can be kept at a level that folks with moderate incomes can afford.

Many properly-ambulatory patients want to arrange for hospital admissions just to have the Plans take care of expenses—the cost of drugs, diagnostic examinations, doctors' services, and the like. In such cases the Plans, were they to accept the liability, would pay not only for the necessary expenses but also for the unnecessary usage of a hospital bed—maybe pay twice what the truly proper care would cost. Similarly, the Plan's expenditure for a hospital stay arranged primarily for someone's convenience would amount to about twice the cost of proper care. Poor folks can not afford to spend money that foolishly, neither directly nor through the Plans which hold their pre-paid funds in trust.

In this regard, however, one point should be emphasized; that is, the Plans never question a physician's professional judgment about an admission. It is not the hospitalization *per se* which is questioned; it is the contractual liability of the Plans to pay for that hospitalization which sometimes must be investigated. The Contract excludes coverage of unnecessary in-hospital stays; subscribers, accordingly, are not prepaying into the Plan toward unnecessary hospitalization, no matter how desirable such might be in certain individual circumstances. If an unnecessary hospital stay is arranged, the individual involved must personally and directly pay for it himself. Blue Cross-Blue-Shield, in effect, defrauds its entire membership whenever it makes an extra-contractual payment, even if it does so inadvertently, and so it is encumbent upon the Plans to determine their true liability status in those cases in which the initial, brief reports make their contractual liability appear doubtful. For success in this endeavor—which is so important to the continued success of voluntary prepayment—the cooperation and support of the medical profession are truly requisite.

Mead Johnson Receives Award

Twin gold medals citing the laboratory and physician which have done the most during the year to further public health in Mexico have been awarded to Mead Johnson de Mexico, S. A., and the founder of the Mexican Academy of Surgery, Dr. Jose Aguilar Alvarez.

The phamaceutical house and Dr. Alvarez were the first to win these new annual awards, known as the Dr. Jimenez medals, of the Fundacion Medico-Farmaceutica. President Ruiz Cortines of Mexico made the presentations to A. J. Torrey, president of Mead Johnson de Mexico, and the physician at an awards dinner in November in Mexico City.

The medals were named for Mexico's late Dr. Miguel Jimenez, who is famed for his clinical work in liver diseases.

Mead Johnson de Mexico is a wholly owned subsidiary of Mead Johnson & Company of Evansville, Indiana. The Mexican firm, founded in 1941, completed a new plant in Mexico City last August. It employs more than 150 persons.

Woman's Auxiliary . . . .

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Greetings from the President

New Year Greetings to each of you! May your membership in the Woman's Auxiliary be a source of real pleasure to you this year and in the years to come. Some of us have yet to realize the opportunities and privileges which our organization offers.

There can hardly be a doctor's wife in these modern times, with so much happening all around us to stimulate our opinions and affect our futures, who would be satisfied to sit at home and answer the telephone for her husband as her sole contact with his work and ever increasingly involved profession. The Woman's Auxiliary gives each doctor's wife a delightful opportunity to gather with her clan. Just attending a meeting once in a while and recognizing that doctors' wives have the same problems is very refreshing. That alone makes the auxiliary a worthwhile organization.

Achieving something worthwhile, however, isn't quite so easy. Someone has to work at it from some angle. Experience has shown us that the ones who do the work get the most out of a project.

Since you have honored me by electing me first, President-elect for a year, and now President, I have learned by visiting you and traveling, as your representative, to two conferences, that doctors' wives are so interested in the auxiliary that they are members of it, not only for their own pleasure but also for the advantages it offers.

Health is probably the most important word in our language. With it we are one thing, without it we are another. We really aimed for the stars when we adopted "Health is a Joint Endeavor" as our National Theme. But then, we modern women would not be content unless we could "project new ideas into the future to parallel the scientific effort to project into space".

We are living today. Our "Joint Endeavor" must be today. Tomorrow there will be another group of women to take our places. They are already preparing for it.

The Woman's Auxiliary to S. A. M. A. (Student American Medical Association) is an actuality. It is now a national organization. But they need our help. We have been offered an opportunity to provide a service that will be one of the most gratifying projects we have ever undertaken. The project is to accept the sponsorship of this auxiliary. The Auxiliary to A.M.A. has given its full approval. In fact, Mrs. Simonds, the lovely young president of SAMA Auxiliary was present at our conference in Chicago. Knowing this attractive young woman was one of my pleasant experiences there. Hearing her tell our entire conference about the desire of young students' wives to prepare themselves for their lives as doctors' wives was an inspiration. There are two medical schools in Virginia. National has asked that the auxiliary in the counties where these schools are located to consider sponsoring an auxiliary to SAMA. Virginia would be proud to cooperate with our youth, particularly when their problems are our problems.

There is a definite place for the Woman's Auxiliary in the community. When physicians' wives became stimulated by a sincere desire to understand health problems and to help in the solution of these problems, the auxiliary was born. Through the various women's organizations to which we belong we can act as liaison on the subject of health and health education.

One of the subjects which is uppermost in our minds just now is Safety. This applies in the home, in the schools, on the highway or wherever people are. The auxiliary can serve this nation nobly by stressing safety individually and as a group. One auxiliary member in each P.T.A., each Woman's Club, Garden Club, Church Auxiliary or countless other organizations which we attend, could stress safety through automotive safety design and construction until the women of America would demand more safety measures in automotive design. The American Medical Association adopted a resolution urging the President of the United States to request legislation from Congress authorizing the appointment of a national body to approve and regulate safety standards of automobile construction. The Woman's Auxiliary

supported it. Now the individual members should take the message to others.

Safety is just one of the many health measures the Woman's Auxiliary supports. We have chairmen for Cancer Control, Civil Defense and Mental Health. There is something we can do individually in our community for each of these. I cannot rightly say there is just one more thing we can do, there are so many, but I can remind you that your hands need not be tied for lack of opportunity or ability to speak in behalf of any health measure. You can give Today's Health to some family, school, library, hospital waiting room, your dentist's reception room or your own husband's office, and A.M.A. will speak for you.

You are modern women and you live in a modern age. Nothing is impossible for you any more. But live now. Do the things today you had thought to put off until tomorrow because "In twenty-four hours they will both be yesterday."

Louise W. St. George
(Mrs. J. R. St. George)

Northampton-Accomac.

The Auxiliaries to the Northampton and Accomac Medical Societies held their fall meeting on November 5th at the home of Mrs. Donald Fletcher, Horsey, with eighteen members in attendance.

Officers for 1957 were installed as follows: President, Mrs. R. K. Brown; vice-president and president for 1959, Mrs. S. S. Kellam; secretary, Mrs. Joseph E. Gladstone; and treasurer, Mrs. Wayne Mears.

Catherine R. Trower (Mrs. E. Holland)
Chairman, Press and Publicity

Hyperthyroidism Symptoms

Patients who appear to be suffering from overactive thyroid glands actually may have "nicotinitis" or "coffeeitis," according to a Wisconsin doctor. Writing in the November 23 Journal of the American Medical Association, Dr. Arnold S. Jackson, Madison, Wis., discussed 228 cases in which the ailments were misdiagnosed as hyperthyroidism. Of these, 112 patients had normal thyroid gland activity, but were nervously exhausted or under great tension. Thirty had menopausal symptoms, 27 were physically exhausted, and the others had a variety of ailments.

Among the 112 patients with a nervous basis for their symptoms, the most important single factor responsible was overindulgence in the use of stimulants—coffee, tea, and nicotine. In fact, the use of stimulants was so important and occurred so often, the terms "coffeeitis" and "nicotinitis" were coined to express the trouble.

Many patients were consuming large doses of barbiturates, tranquilizers, and other drugs in an effort to combat the nervous stimulation and its resultant nervous tension, palpitation of the heart, tremor, insomnia, and weight loss. The effect of withdrawing these drugs and restoring the patient to a normal routine was dramatic.

The symptoms of an overactive thyroid may be confused with those of nervous exhaustion, although there are distinguishing factors. Weight loss, heart palpitations, moist warm skin, prominence of the eyes, tremor of the fingers, nervousness, and insomnia, may occur with hyperthyroidism or nervous prostration.

However, in weight loss from hyperthyroidism, the patient does not usually lose his appetite as he does in nervous exhaustion. In hyperthyroidism, there are characteristic changes in blood pressure and weakness of certain muscles which do not occur in the other condition.

Dr. Jackson noted that basal metabolism tests, the common test for thyroid activity, often may be inaccurate. This frequently occurs because the patient is nervous and breathes faster during the test than he normally does. The test is based on the individual's use of oxygen. Before a physician makes a diagnosis of hyperthyroidism on the basis of the metabolism test, he should consider the other physical signs of weight loss, blood pressure, and muscular weakness. In addition, he should make sure that nervous tension and exhaustion are not the causes of the symptoms.

He noted that emergency surgical removal of the thyroid gland is frequently recommended for hyperthyroidism. The operation should never be considered as emergency. Time must be taken to make certain that the patient actually has an overactive thyroid gland and is not suffering from some other condition. Once a diagnosis of hyperthyroidism is established, then an operation is in order, he concluded.

Book Announcements . . . .

Books received for review are promptly acknowledged in this column. In most cases, reviews will be published shortly after the acknowledgement of receipt. However, we assume no obligation in return for the courtesy of those sending us books.

Orthopedics For the General Practitioner. By WILLIAM E. KENNEY, M.D., Orthopedic Surgeon, Truesdale Hospital; Hospital Director, Cerebral Palsy Training Center, Fall River, Mass.; etc. And CARROLL B. LARSON, M.D., F.A.C.S., Professor of Orthopedic Surgery and Chairman of Department of Orthopedic Surgery, State University of Iowa. The C. V. Mosby Company, St. Louis. 1957. 413 pages with 180 illustrations. Cloth. Price $11.50.

From Sterility To Fertility. A Guide to the Causes and Cure of Childessness. By ELLIOT E. PHILIPP, M.A., M.B., B. Chir., F.R.C.S., M.R.C.O.G. Philosophical Library, New York. 1957. 120 pages. Cloth. Price $4.75.

Fads and Fallacies In the Name of Science. (Formerly published under the title of In the Name of Science). By MARTIN GARDNER. Dover Publications, Inc., New York. 1957. x-363 pages. Paper. Price $1.50.

Clinical Toxicology of Commercial Products. Acute Poisoning (Home and Farm). By MARION N. GLEASON, Rsearch Assistant in Pharmacology, School of Medicine and Dentistry, The University of Rochester, Rochester, N. Y. ROBERT E. GOSSELIN, M.D., Ph.D., Professor of Pharmacology, Dartmouth Medical School, Hanover, N. H. HAROLD C. HODGE, Ph.D., D.Sc., Professor of Pharmacology, School of Medicine and Dentistry, The University of Rochester. The Williams & Wilkins Company, Baltimore. 1957. xv-1160 pages. Cloth. Price $16.00.

Methodology of the Study of Ageing. Volume 3, Ciba Foundation Colloquia on Ageing. Editors for the Ciba Foundation, G. E. W. Wolstenholme, O.B.D., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc. Little, Brown and Company, Boston. 1957. x-202 pages. With 47 illustrations. Cloth. Price $6.50.

The Chronically Ill. By JOSEPH FOX, PhD. Philosophical Library, Inc., New York. xix-229 pages. Cloth. Price $3.95.

A Book of Contemplation. By DAGOBERT D. RUNES. Philosophical Library, Inc., New York. 149 pages. Cloth. Price $3.00.

Manual of Nutrition. Philosophical Library, Inc., New York. 67 pages. Cloth. Price $3.50.

Hormones In Blood. Ciba Foundation Colloquia on Endocrinology. Volume II. Editors for the Ciba Foundation, G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Elaine C. P. Millar, A.H.-W.C., A.R.I.C. Little, Brown and Company, Boston, Massachusetts. 1957. xii-416 pages. With 74 Illustrations. Cloth. Price $9.00.

Atomic Energy In Medicine. By K. E. HALNAN. Philosophical Library, New York. 1957. ix-157 pages. Cloth. Price $6.00.

Ophthalmology and Otolaryngology. Surgery in World War II. Medical Department, United States Army. Editor in chief, Colonel John Boyd Coates, Jr., M.C. Editor for ophthalmology, M. Elliott Randolph, M.D. Editor for Otolaryngology, Norton Canfield, M.D. Associate Editor Elizabeth M. McFetridge, M.A. Office of the Surgeon General, Department of the Army, Washington, D. C., 1957. xxiii-605 pages. Cloth. Price $5.00.

Deafness, Mutism and Mental Deficiency In Children. By LOUIS MINSKI, M.D., F.R.C.P., D.P.M., Consultant Psychiastrist, Royal National Throat, Nose and Eye Hospital, London; etc. Philosophical Library, New York. 1957. viii-82 pages. Cloth. Price $3.75.

Practical Use of the Office Laboratory and X-Ray. Including the Electrocardiograph. By PAUL WILLIAMSON, M.D. The C. V. Mosby Company, St. Louis. 1957. 323 pages. Illustrated. Cloth. Price $10.75.

Selected Writings of Walter E. Dandy. Compiled by Charles E. Troland, M.D., and Frank J. Otenasek, M.D. Charles C. Thomas, Springfield, Illinois. 1957. vii-789 pages. Illustrated. Cloth. Price $15.00.

Allergy In Pediatric Practice. By WILLIAM B. SHERMAN, M.D., Associate Clinical Professor of Medicine, Columbia University College of Physicians and Surgeons; etc. And WALTER R. KESSLER, M.D., Ph.D., Instructor in Pediatrics, Columbia University College of Physicians and Surgeons; etc. The C. V. Mosby Company, St. Louis. 1957. 296 pages. Illustrated. Cloth. Price $9.25.

Experimental Psychology and Other Essays. By I. P. PAVLOV. Philosophical Library, New York. 1957. 653 pages. Cloth. Price $7.50.

A major branch of human knowledge, physiology, has never had a brighter star emerge on its advancing horizon than that of Pavlov. A new era was ushered in with the coming of age of this great Russian materialist-physiologist, and this comprehensive anthology presents many of his basic writings in a very readable text. From reading through this sometimes esoteric treatise, one is impressed, foremost, that here is a man dedicated, perhaps too dogmatically so, to bringing out his thesis which maintained that materialism was dominant. Idealism was anathema to him, for it held that the soul and body were disunited and fundamentally opposed. There have been vigorous opponents to his views and among them have been the famous British physiologist Sherrington, who would not accept materialism, and openly declared against the theory of conditional reflexes. He, (Sherrington) felt that thought and emotions are beyond the confines of natural sciences. Sigmund Freud's views clashed head-on with those of Pavlov also, and this, perhaps, has had the most

profound result on our lives to date. Freud, of course, believed that human behavior is directed primarily by unconscious instincts with an overtone of early childhood experiences, and that the sex instinct is the source of our mental energy. The Society of Biological Psychiatry, The Pavlovian Society, and other groups differ sharply with Freudian thought and seek a return to the bases preached by Pavlov, i.e basic materialism.

"Experimental Psychology and Other Essays" reveals the uncompromising struggle by Pavlov to solve the problems of higher nervous activity. He uses all idealists as his dedicated enemies and gives full vent to his thoughts in this volume. An explanatory appendix "Notes and Commentary" defines terms used, as well as filling the reader in on some of the more interesting historical background under which his speeches and essays were rendered.

The Philosophical Library has brought together a comprehensive anthology worthy of other titles in their series. It is a book which should have great appeal to a limited group, however, and will probably be read only by physiologists, psychiatrists, and those of allied interests. To them, it is highly recommended by this reviewer.

ROBERT EDGAR MITCHELL, JR., M.D.

The Fight For Fluoridation. By DONALD R. McNEIL. New York. Oxford University Press. 1957. x-241 pages. Cloth. Price $5.00.

The author who is the associate director of the Wisconsin State Historical Society has chronicled the raging controversy over whether or not to fluoridate public water supplies with the characteristic thoroughness of a student of history. He traces the fluoride story from its inception in Colorado Springs where a dentist, Frederick S. McKay, first became interested in the brown "Colorado stain" on the teeth in 1901 through the isolation of fluoride in high concentration from the public water supply by a chemist in the ALCOA laboratories. His account of the tireless efforts in the 1930's of a U. S. Public Health Service team headed by H. Trendley Dean in correlating low dental caries incidence with consumption of water naturally containing fluorides in widely scattered U. S. communities gives the reader an insight into the cautious approach and complete evaluation before this measure was recommended for general use.

With the overwhelming approval of the U. S. Public Health Service, the American Dental Association, American Medical Association and other professional groups to artificially fluoride drinking water to 1 part per million as an anti-caries measure, battle lines were formed. Vociferous protests raised by small but effective groups appealing to the emotions rather than the intelligence of the population effectively defeated fluoridation proposals starting in Stevens Point, Wisconsin and encompassing many cities throughout the country. Despite overwhelming evidence for the safety, economy and effectiveness in the reduction of dental decay, water fluoridation has unfortunately become a burning political issue in many localities—unfortunate because such a scientific proposal has been thrust into the political arena where a rational appraisal is not always possible.

Mr. McNeil's analysis of fluoridation opponents, their methods and organization may be particularly pertinent to the organized health professions of Virginia where resistance to this highly valuable public health measure is becoming evident. Like the proposals to immunize against smallpox and pasteurize milk, the fight for fluoridation will require the active support of all who are interested in a significant reduction of one of mankind's most common diseases —dental caries.

J. J. SALLEY

Practical Diagnosis and Treatment of Liver Disease. By CARROLL MOTON LEEVY, M. D., Director of Clinical Investigation, Director of the Outpatient Department, and Attending Physician, Jersey City Medical Center, Jersey City, N. J.; Consultant in Medicine, U. S. Naval Hospital, St. Albans, N. Y. Foreword by Franklin M. Hanger, M. D., Professor of Medicine, College of Physicians and Surgeons, Columbia University. Illustrations by Felix Traugott. Paul B. Hoeber, Incorporated, New York. 1957. xii-336 pages. Illustrated. Cloth. Price $8.50.

In this treatise on the liver, Dr. Leevy and his associates at the Jersey City Medical Center, Jersey City, New Jersey, have assembled a wealth of practical information. The aim of the authors has been to correlate a vast array of clinical as well as physiological facts on the liver and its disorders, with emphasis on therapy. This they have achieved with conciseness and clarity. Some chapters are not as complete as may be desired but they have included the essentials in the 318 pages.

This book is adequately bound and well printed. Mr. Felix Traugott has done a fine job with the illustrations. The 23 full color illustrations are especially attractive.

The practicing clinician and others with a special interest in liver disease will find current therapies in a well defined yet concise compendium and it is strongly recommended for their usage.

ROBERT EDGAR MITCHELL, JR., M.D.

Clinical Toxicology of Commercial Products. Acute Poisoning (Home and Farm). By MARION N. GLEASON, Research Assistant in Pharmacology, School of Medicine and Dentistry, The University of Rochester, Rochester, N. Y. ROBERT E. GOSSELIN, M.D., Ph.D., Professor of Pharmacology, Dartmouth Medical School, Hanover, N. H. HAROLD C. HODGE, Ph.D., D.Sc., Professor of Pharmacology, School of Medicine and Dentistry, The University of Rochester. The Williams & Wilkins Company, Baltimore. 1957. xv-1160 pages. Cloth. Price $16.00.

This is by far the most comprehensive book available on clinical toxicology of commercial products. It is aimed at giving the physician information concerning the ingredients of many of the commonly used home and farm products. If the physician knows what he is dealing with, in a possible poisoning, he has a decided advantage in giving proper treatment.

This book, as a reference volume will be of immeasurable help in poisoning emergency. It is divided into seven sections with the greatest emphasis on the section identifying the ingredients of about 15,000 common commercial products. This represents countless hours of hard toil in its accurate accumulation.

Section I. Gives a short synopsis of general measures of first aid and emergency treatment.

Section II. Has an alphabetical compilation of several hundred common household ingredients with an appoximate toxicity rating. This will be of value to the physician as an index of potential danger.

Section III. Summarizes signs, symptoms, general and specific treatment for sixty-eight compounds which were so chosen as reference congeners for back reference.

Section IV. Techniques of supportive measures necessary in emergency toxicology.

Section V. Represents about 75% of this book. More than 800 pages are devoted to the alphabetical listing of about 15,000 trade names with their ingredients, name and address of the company that makes it and also an approximate toxicity rating. Harmful ingredients can be referred back to Section III as congeners for general or specific treatment.

Section VI. General formulation that are typical or representative, are given for diverse types of products.

Section VIII. Name and address of manufacturers of these above products are given so that physicians may quickly contact them for additional information if necessary.

This book is highly recommended to busy practitioners, and emergency rooms as a ready reference in identification of possible harmful ingredients, and for suggestions for proper management in cases of emergency poisoning.

SIDNEY KAYE, PH.D.

"Going Our Way"

A Parke-Davis movie, "Going Our Way?", takes on "added significance" in view of President Eisenhower's talk on the need for more scientific training. The color film, available for free showings before high schools, service clubs, pharmaceutical and medical groups, tells of careers in the health fields that are open to high school students.

"Going Our Way?" features a Hollywood cast, including Marshall Thompson in the lead as a young doctor in a small town; a number of re-created historical scenes; and it runs 29 minutes.

Bookings for the film are being handled by Modern Talking Pictures, Inc., 3 East 54th Street, New York 22, New York.

Current Currents

SPECIAL REPORT ON ACTIONS OF THE HOUSE OF DELEGATES OF THE AMA

THE MOST CONTROVERSIAL issue at the Philadelphia meeting had to do with the fluoridation of public water supplies. The House approved a joint report of the Council on Drugs and the Council on Foods and Nutrition which endorsed the fluoridation of water as a safe and practical method of reducing the incidence of dental caries during childhood.

The 27 page report recognized the responsibility of each community to decide for itself whether or not fluoridation should be put into effect. It contained the following conclusion: "Fluoridation of public water supplies should be regarded as a prophylactic measure for reducing tooth decay at the community level and is applicable where the water supply contains less than the equivalent of 1 ppm of fluorine."

FREE CHOICE OF PHYSICIAN in relation to contract practice was another issue which received careful consideration. The House passed a resolution which reaffirmed approval of previous interpretations of the Principles of Medical Ethics by the Association's Judicial Council and directed that they be called to the attention of all constituent associations and component societies. One Council opinion, issued in 1927 and reaffirmed in Philadelphia, stated that the contract practice of medicine would be determined to be unethical if "a reasonable degree of free choice of physician is denied those cared for in a community where other competent physicians are readily available."

Another resolution was adopted condemning the current attitude and method of operation of the United Mine Workers of America Welfare and Retirement Fund "as tending to lower the quality and availability of medical and hospital care to its beneficiaries." The resolution called for a broad educational program to inform the general public, including Fund beneficiaries, concerning the benefits to be derived from preservation of the American right to freedom of choice of physicians and hospitals. Reference was again made to the "Guides to Relationships Between State and County Medical Societies and the UMWA Welfare and Retirement Fund"—adopted by the House last June.

THE ASIAN INFLUENZA immunization program came in for its share of attention, and a resolution was adopted calling attention to "certain inadequacies and confusions in the distribution of vaccines" and directing the Board of Trustees to seek conferences through existing committees "with a view to establishing a code of practices regulating the future distribution of important therapeutic products, so that the best interest of all the people may be served." It was pointed out that the AMA already has a joint committee with the American Pharmaceutical Association and the National Association of Retail Druggists, and a liaison committee with the Drug Manufacturers Association.

THE HOUSE CONDEMNED THE FORAND BILL as undesirable legislation and expressed satisfaction that the Board of Trustees has appointed a special task force which is taking action to defeat the bill. This piece of legislation, officially designated HR 9467, would provide hospital, nursing home and surgical care for persons eligible to receive social security benefits.

In a related action, the House gave strong approval to Dr. Allman's address, and adopted the following statement: "It is particularly timely that our President has so forcefully sounded the clarion call to the entire profession for emergency action. With complete unity, definition and singleness of purpose, closing of ranks with all age groups and elements of our organizations we must at this time stand and be counted. Thus we can exert the physician's influence in every possible direction against invasions of our basic American liberties in the form of proposed legislation alleged to compulsorily insure one segment of the population against health hazards at the expense of all."

HEALTH PROGRAMS FOR HOSPITAL EMPLOYEES were considered and a set of "Guiding Principles for Occupational Health Program in a Hospital Employee Group" was approved by the House. The Guides, developed by a joint committee of the AMA and the American Hospital Association, included these statements:

"Employees in hospitals are entitled to the same benefits in health maintenance and protection as are industrial employees. Therefore, programs of health services in hospitals should use the techniques of preventive medicine which have been found by experience in industry to approach constructively the health requirements of employees.

"It is essential that employee health programs in hospitals, as in industry, be established as separate functions with independent facilities and personnel. The fact that hospitals are engaged in the care of the sick as their primary function does not alter the necessary organizational plan for an effective occupational health program."

THE HOUSE ACCEPTED a 115-page "Guide to the Evaluation of Permanent Impairment of the Extremities and Back" which was developed by the Committee on Medical Rating of Physical Impairment. The Delegates commended the Committee for doing "a superb job on this difficult subject" and expressed pleasure that the Guides will be published in the Journal of the AMA. These Guides should be of particular help to physicians in determining impairment under the new disability benefits program of the Social Security Act.

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This summary covers only a few of the important subjects considered by the AMA House of Delegates. The items were selected because of their unusual interest.

President's Message . . . .

AT THE LAST MEETING of the House of Delegates action was taken that prescribed a special session of the House in the Spring of 1958. The purpose of this special meeting is to further discuss and determine our relationship with Medicare.

Our current contract with the Medicare Program expires on June 30, 1958. It is probable that we will be asked to renew this contract on the same basis for another fiscal year, even though we are not due to renegotiate a new contract with changes on either side until November, 1958, to be effective in July, 1959.

As is usual in such cases, there are two sides to the question. Many of the physicians participating under the plan are finding it to their liking. Many other physicians feel that there are several things about Medicare that they can't accept. Opponents of this plan say it is the forerunner of more and bigger socialized medicine. Proponents claim that it did away with the "Doctor Draft". Other arguments are advanced on both sides.

Basically, it boils down to this. Citizens of our country are receiving civilian medical care and the Federal Government is paying their bills for them out of tax funds. That is socialized medicine. When all the arguments about physicians participating in Medicare, pro and con, are stripped down to the lowest common denominator, the decision we must come to is whether we will not only condone but assist in this program. There is no half-way point. As the program now stands, your Medical Society of Virginia is aiding and abetting government medicine, by your acquiescence. We have been offered no other arrangement. The longer the present contract is extended, the more complacent we are expected to become, on the theory that if we can't change it we will learn to live with it.

It is the duty of the House of Delegates to determine our future action. I hope that every component society will go over this problem thoroughly and instruct its Delegates so that they may come to the special meeting well prepared.

The actual date of the meeting has not yet been officially set. I should like to see as much time beforehand as possible so that all facets of the problem can be covered. There must be sufficient time after the special session to allow the Committee to tie together the action of the House of Delegates and make ready to negotiate. It would appear that sometime in April would be about right. Ample notice will be given, and I hope all Delegates will make it a point to be there.

H C Bates, Jr.

President

Editorial . . . .

St. Luke's Hospital: 1882-1957

IT HAS BEEN SAID that an institution is the lengthening shadow of its founder. If this is true, St. Luke's Hospital, which has just celebrated the seventy-fifth anniversary of its founding, is the lengthening shadow of two of the most renowned surgeons of the South—Dr. Hunter Holmes McGuire and his son, the late Dr. Stuart McGuire.

In the Fall of 1882, Dr. Hunter McGuire and his associates, Drs. Hugh M. Taylor and Lewis Wheat opened the St. Luke's Home for the Sick in the Richmond House, a former hotel on the northeast corner of Ross and Governor Streets. This building and an annex which extended up Governor Street behind the Governor's Mansion could accommodate forty-eight patients. Following the then prevailing Virginia custom, the kitchen was detached from the hospital and ambulatory patients ate family style in the hospital dining room. For the first ten years all operations were carried out in the patient's rooms. The charge for bed, board, and nursing varied from six to ten dollars per week, depending upon how plush the accommodations were.

In these days of hospital crowding and long waiting lists for admission the leisurely tempo of that remote era is indicated by the custom of closing St. Luke's for six weeks each summer, while the building was renovated and the staff took a well earned vacation. In 1886 a training school for nurses was established. This was the first in Virginia and the second in the South.

In 1900, eighteen years after its founding, St. Luke's Hospital had outgrown its birthplace and was moved to its present location on the north side of Grace Street at Harrison. The new hospital was situated in the rapidly growing western end of the city. Dr. Hunter McGuire died this same year.

Undeterred by the professional and financial responsibilities involved, Dr. Stuart McGuire, then only thirty-three years of age and nine years out of medical school, took over the management of Richmond's only private hospital.

Under his dynamic leadership it became necessary to add a fourth floor and subsequently three additions increased the bed capacity of the hospital to ninety-two. The McGuire Clinic which was formed after World War I by former associates in Base Hospital No. 45 was housed under the same roof. St. Luke's Hospital was closed during Dr. McGuire's absence overseas and the building was used as a dormitory for Westhampton College students. A handsome library was built, which has served as a meeting place for numerous medical organizations.

The death of Dr. McGuire in 1948 did not impair the progress of St. Luke's and recently both sides of the 1000 block of West Grace Street showed evidences of the continued expansion and modernization of this hospital and its facilities. The Virginia Medical Monthly salutes St. Luke's Hospital on its diamond jubilee and wishes it many more years of success in the care of the sick of Richmond and Virginia.

H.J.W.

Society Proceedings....

Richmond Academy of Medicine.

At the annual meeting of the Academy, held on December 10th, Dr. Webster P. Barnes succeeded Dr. Elam C. Toone, Jr., to the presidency. Dr. Thomas W. Murrell, Jr., was named president-elect; Drs. Carl W. Meador and Robley D. Bates, Jr., vice-presidents.

The Virginia Orthopedic Society

Held its annual business meeting at The Shoreham in Washington, on October 29th. Dr. J. Hamilton Allen, Charlottesville, was elected president with Dr. George G. Hollins, Norfolk, vice-president. Dr. Richard H. Fisher, Staunton, was elected secretary-treasurer.

Danville-Pittsylvania Academy of Medicine.

At the regular meeting of the Academy, held on November 8th, Dr. Arnold Salsburg, Medical College of Virginia, spoke on Pediatric Surgery.

Association of Seaboard Air Line Surgeons.

The annual meeting of this Association was held in Richmond the first of October. During the four-day meeting, medical and surgical clinics were held at the Medical College of Virginia Hospitals, Johnston-Willis Hospital and Richmond Memorial Hospital.

Dr. J. W. Parker, Jr., Seaboard, N. C., was elected president; Dr. Frank D. Gray, Orlando, Fla., president-elect; Dr. Wells Lowman, Denmark, S. C., and Dr. F. P. Barrow, Portsmouth, vice-presidents.

News....

Our New Cover.

The Medical Society of Virginia will have a new headquarters building in 1958 and it was felt the Virginia Medical Monthly should have a new cover. Therefore, this shows the new building which it is anticipated will be occupied by July, 1958. We shall miss the Eli Lilly advertising on our front cover but have long felt we should discontinue advertising in this space. We hope you like it!

New Members.

Since the list published in the December issue of the Monthly, the following new members have been admitted into The Medical Society of Virginia:

Frances Ayres, M.D., Falls Church
Peter Bartsch, M.D., Richlands
Mikio Kato, M.D., Tangier
Timothy Leonard Kelly, Jr., M.D., Arlington
Robert William Moseley, M.D., Galax
Pierre Brutsche Scott, M.D., Charlottesville
Charles Harold Spiggle, M.D., Strasburg
Andrew Tessitore, M.D., Vienna
William Greene Way, M.D., Winchester

Dr. Edwin P. Jordan,

Member of the University of Virginia medical faculty, has been awarded a certificate of merit by the National Society for Medical Research "in recognition of vital contributions to public health and welfare made by helping to inform the public of the experimental method underlying the achievements of the biological sciences."

The certificate presented to Dr. Jordan was the result of health columns written by him for NEA Syndicate and published in some three hundred newspapers. He has been writing these columns since 1946 and has prepared well over three thousand.

R. Finley Gayle Observation and Treatment Center.

This newly completed center at Southwestern State Hospital was dedicated on December 1st. It is the Security Building designed to provide observation and treatment primarily for the so-called "criminal insane" and has a capacity of 240.

The Building was named for the late Dr. R. Finley Gayle, Jr., before his death in October of 1957.

C. & O. Surgeons.

Dr. R. Preston Hawkins, Jr., Clifton Forge, was elected president of the Association of Surgeons of the C. & O. Railway at its meeting held at The Greenbrier, White Sulphur Springs, November 18th and 19th. He succeeds Dr. J. Earl McIntyre of

Lansing, Michigan. Dr. Henry B. Mulholland, Charlottesville, was elected vice-president.

International Congress of Internal Medicine.

The Fifth Congress will be held in Philadelphia, April 23-26. This is the first meeting of this Society to be held in this country and another is not likely to be held here for a decade.

The scientific program will include both morning and afternoon sessions and world-renowned medical authorities have been included on the program.

Dr. G. S. Hartley

Has been elected secretary of the Clifton Forge Board of Health and named health officer for the city.

The American College of Physicians

Named the following Virginia physicians as Fellows of the College at the November 9-10 meeting of the Board of Regents in Philadelphia:

Dr. Joseph Davis Lea, Norfolk
Dr. Arnold Ferdinand Strauss, Norfolk
Dr. Isabel Taliaferro, Richmond

The following were named as Associates of the College:

Dr. Joseph Beinstein, Arlington
Dr. Leo Ernest Johns, Jr., Norfolk
Dr. Arthur Sanford Kaplan, Norfolk
Dr. James William Lambdin, Franklin
Dr. Paxton Pitman Powers, Staunton
Dr. William Whitfield Regan, Richmond

Dr. William Philip Wagner,

After two and one-half years of meritorious service as director of the Dinwiddie-Prince George-Surry-Sussex health district, has been appointed director of the Tri-County health district, effective January 1, 1958. This district is composed of Isle of Wight, Nansemond and Southampton counties and the City of Suffolk.

Dr. Wagner fills the vacancy left by the death of Dr. H. D. Crow last July.

American Trudeau Society.

The 53rd Annual Meeting of this Society will be held in Philadelphia on May 19-21. On the 22nd, the Society will meet jointly with the National Tuberculosis Association. In addition to papers by clinicians and investigators from universities and medical centers throughout the country, there will be panels on the tuberculin test, fungus diseases of the lung, and radiation hazards.

Memorial to Dr. Warriner.

The Crewe Chamber of Commerce has presented a check of $3,800 to the Southside Community Hospital, Farmville, to be used to build and furnish a room in memory of Dr. W. W. Warriner, Crewe physician who died last year.

Dr. Harold W. Miller,

Woodstock, has been re-appointed Medical Examiner of Shenandoah County for another three year term.

Dr. Willard R. Ferguson,

Assistant director of the Halifax-Pittsylvania-Danville health district, has been named to fill the vacancy left by the promotion of Dr. Wagner to the Tri-County-Suffolk district. Dr. Ferguson who joined the State Health Department in August, 1956, will assume his duties as health director for the Dinwiddie district as of January 1, 1958.

Eye Bank at Roanoke.

An eye bank has been established in Roanoke and its name is Eye Bank and Sight Conservation Society of Virginia. This is sponsored by the Lions Club of Virginia and is located at the Elbyrne G. Gill Eye and Ear Foundation.

American Board of Obstetrics and Gynecology.

The next scheduled examination (Part II), oral and clinical for all candidates will be conducted at the Edgewater Beach Hotel, Chicago, from May 7 through 17, 1958. Formal notice of the exact time of each candidate's examination will be sent him in advance of the examination dates. Candidates who participated in the Part I examinations will be notified of their eligibility for the Part II as soon as possible.

Wanted.

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Obituaries . . . .

Dr. Loren Eugene Cockrell,

Beloved physician of Reedville, died November 15th, at the age of eighty-seven. He was a graduate in medicine of the University of Maryland in 1895 and had practiced in Reedville for sixty years. Dr. Cockrell was honored in 1955 by the congregation of Bethany Methodist Church and tribute was paid to his services to the community. He was a Life Member of The Medical Society of Virginia, having been a member for sixty-one years.

Dr. Cockrell is survived by two daughters and four sons.

Dr. Rufus Ayers Morison,

Nationally recognized heart specialist of Abingdon, died November 22nd. He was seventy-three years of age and a graduate of Johns Hopkins Medical School in 1915. Dr. Morison, along with two other physicians, was credited with inventing the electro-cardiograph machine. He was on a five-member commission sent by President Wilson to England to study the British system of cardiac treatment and was later in command of the first army convalescent camp established in France. Dr. Morison served in a number of medical posts with the government and was also known as an engineer, writer and artist. He began his practice in Abingdon in 1921 and was chief of the staff of Johnston Memorial Hospital at the time of his death. He had been a member of The Medical Society of Virginia since 1923.

His wife, four sons and one daughter survive him.

Dr. Farmer.

WHEREAS, Almighty God has seen fit to take from our midst our friend and colleague, Dr. Frank A. Farmer, on Octoher 9, 1957, and

WHEREAS the memhers of the Roanoke Academy of Medicine are deeply grieved at his passing and acknowledge the loss of a loyal friend and physician.

BE IT, THEREFORE, RESOLVED, that the Roanoke Academy of Medicine record in its minutes our sorrow at the passing of Dr. Farmer and that a copy of this resolution be entered in the minutes of the Society, a copy forwarded to the family of the deceased, and a copy sent to The Medical Society of Virginia.

Dr. Frank A. Farmer, who died suddenly in his office October 9, 1957, was born September 15, 1891, in Halifax County, Virginia. He was graduated from the Medical College of Virginia with the M.D. degree in 1916. He then served an internship at Memorial Hospital in Richmond. From there he came to Roanoke as resident physician at Shenandoah Hospital and began the general practice of medicine. Soon after coming to Roanoke he volunteered for service in the Medical Corps of the United States Army and served two years in World War II.

Dr. Farmer was a past president of the Roanoke Academy of Medicine and of the Southwest Virginia Medical Society. He had served as vice-president of The Medical Society of Virginia. He was instrumental in organizing a Roanoke Chapter of the Virginia Academy of General Practice and was vice-president of the state organization. He was a member of A. M. A. and affiliate member of the International College of Surgeons. Dr. Farmer was a Mason and Shriner and a devoted member of the Board of Deacons of the Calvary Baptist Church of Roanoke, Virginia.

Dr. Farmer is survived by his widow, Mrs. Lola Daniel Farmer, and son and daughter, Frank A. Farmer, Jr., and Betty Daniel Farmer.

Dr. Farmer was an able and respected physician and was untiring and devoted in his administrations to his patients, many of whom considered him their best friend.

HARRY B. STONE, JR.
FRED E. HAMLIN
IRA H. HURT, *Chairman*

Dr. Young.

WHEREAS Almighty God has seen fit to take from our midst our friend and colleague Dr. Charles Augustus Young, on July 25, 1957, and

WHEREAS, the members of the Roanoke Academy of Medicine are deeply grieved at his passing and acknowledge the loss of a great physician.

BE IT, THEREFORE RESOLVED, that the Roanoke Academy of Medicine record in its minutes our sorrow at the passing of Dr. Young and that a copy of this resolution be entered in the minutes of the Society, a copy forwarded to the family of the deceased, and a copy sent to The Medical Society of Virginia.

Roanoke and the State of Virginia sustained a great and lasting loss through the death of Dr. Charles Augustus Young on July 25, 1957. Dr. Young was born in Baltimore, Maryland, and graduated from the University of Maryland School of Medicine in 1914. Interned at the Maryland General Hospital, Baltimore, Maryland.

He was married to Jettie L. Coffman in 1916. To this couple were born three children, one—Dr. Charles Augustus Young, Jr. was associated with his father in the practice of Ophthalmology.

From 1917 to 1919 he served as a Medical Officer in the Medical Corps U. S. Army with the 78th Division, A.E.F. Entered the Graduate School of Medicine University of Pennsylvania in the department of Opthalmology in 1920 and graduated with Master of Science degree in 1923; the last eighteen months of this period was spent as House Surgeon in the Wills Eye Hospital, Philadelphia, Pa.

Located in Roanoke where he practiced Ophthalmology after 1923 except while serving in the Medical Corps of the U. S. Navy, (Lt. Comdr. to Captain) 1941 to 1946. He was on the staff of local hospitals, also consultant at the Veterans Administration Hospital, Roanoke. July 20, 1954 he was appointed a member of the State Board of Opticians.

Dr. Young was a member of the local, state, and national medical societies, also the Virginia Society of Ophthalmology and Otolaryngology, American Academy of Ophthalmology and Otolaryngology, Association for Research in Ophthalmology, Pan-American Association of Ophthalmology, and the American Ophthalmological Society. He was past President of Roanoke Academy of Medicine 1946, Virginia Society of Ophthalmology and Otolaryngology, 1951, and Wills Eye Hospital Society 1952 and 1953.

Perhaps his most memorable quality was his brilliant mind. He had an unquenchable thirst for knowledge coupled with a seemingly endless well of energy. His patients idolized him. He had a charming personality and his patients were always lifted up after seeing him. He was truly one of organized medicine's best boosters. He was quick to defend and slow to criticize his colleagues. Loyalty to friends was one of his outstanding characteristics.

Perhaps the greatest tribute paid to him was made by many who on the occasion of his death voiced the sentiment expressed by one who said: "He was the best friend I ever had, he was a man you could talk to."

All of us will miss "Charlie".

IRA HURT, M.D.
FRANK FARMER, M.D.
FRED E. HAMLIN, M.D., *Chairman*

Dr. Rhudy.

Dr. George Garland Rhudy died at the age of 68 on June 20, 1957 in Colorado enroute to California on a vacation tour.

He was born at Elk Creek, Grayson County, Virginia, September 4, 1888. He graduated from the Medical College of Virginia June 1915 and interned at the Memorial Hospital, Richmond. Following internship, he engaged in the practice of medicine at Stonega, Virginia, until 1918, at which time he volunteered for active duty in World War I. He was a Captain in the Medical Corps, United States Army, and served on loan to the British Army. Following discharge from military service, he served a fellowship at the Rush Medical College, Chicago, Illinois, specializing in Eye, Ear, Nose and Throat. He also did post-graduate work in his specialty at the University of Pennsylvania. He practiced in Wytheville, Virginia and Bluefield, West Virginia, before coming to Roanoke in 1927. In addition to his private practice, Dr. Rhudy served the Roanoke VA Hospital as EENT consultant from its beginning, rendering an excellent service to the veterans hospitalized there.

Among his many fine qualities one finds his uncompromising honesty in dealing with his fellow man and his sincere devotion to duty. Because of his sincerity, simplicity and good-naturedness, he was able to claim the friendship of members of the medical and nursing profession as well as the ordinary rank and file of society.

Dr. Rhudy always took a great deal of interest in outdoor life and spent many happy hours on his farm, near Salem, working with his bees, and riding horses.

Dr. Rhudy's untimely death is a great loss to the community and to the medical profession, and we, his friends, shall greatly miss him.

BE IT RESOLVED, that a copy of this resolution be recorded in the minutes of the Roanoke Academy of Medicine and that copies be sent to his two daughters and the Virginia Medical Monthly.

DR. ALEXANDER MCCAUSLAND
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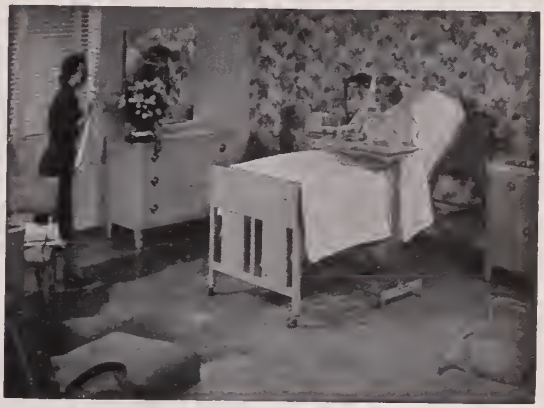
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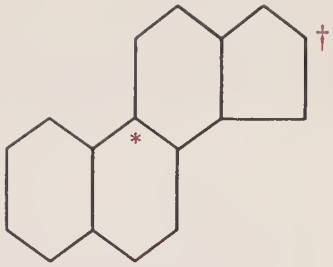
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Biological Effects of Aristocort

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Kidney function

Animal studies on ARISTOCORT[1] have not demonstrated any interference with creatinine or urea clearance. Autopsy surveys of organs of animals on prolonged study of this medication have shown no renal damage.

Sodium and water

ARISTOCORT produced an increase of 230 per cent of water diuresis and 145 per cent sodium excretion when compared to control animals.[1] Metabolic balance studies in man revealed an average negative sodium balance of 0.8 Gm. per day throughout a 12-day period on a dosage of 30 mg. per day.[2] Additional balance studies showed actual sodium loss when ARISTOCORT was given in doses of 12 mg. daily.[3] Other investigators observed significant losses of sodium and water during balance studies and that those patients with edema from some older corticosteroids lost it when transferred to ARISTOCORT.[4,5] In two studies of various rheumatic disorders (194 cases) on prolonged treatment, sodium and water retention was not observed in a single case.[6,7]

Potassium and chlorides

There was no active excretion of potassium or chloride ions in animals given maintenance doses of ARISTOCORT 25 times that found to be clinically effective.[1] Potassium balance studies in humans[2,3] revealed that negative balance did not occur even with doses somewhat higher than those employed for prolonged therapy in rheumatoid arthritis. Hypokalemia, hyperkalemia or hypochloremia did not occur, when tested, in 194 patients with rheumatoid arthritis treated for up to ten and one-half months.[6,7]

Calcium and phosphorus

Phosphate excretion in animals[1] was not changed from normal even with amounts 25 times greater (by body weight) than those known to be clinically effective. Human metabolic balance studies[3] demonstrated that no change in calcium excretion occurred on dosages usually employed clinically when the compound is administered for its anti-inflammatory effect. Even at a dosage level twice this, slight negative balance appeared only during a short period.

Protein and nitrogen balance

Positive nitrogen balance was maintained during a human metabolic study on maintenance dosage of 12 mg. per day.[3] At dosages two to three times normal levels, positive balance was maintained except for occasional short periods in metabolic studies of several weeks' duration.[2,3]

There was always a tendency for normalization of the A/G ratio and elevation of blood albumin when ARISTOCORT was used in treating the nephrotic syndrome.[8]



Liver glycogen deposition and inflammatory processes

An intimate correlation exists between the ability of a corticosteroid to cause deposition of glycogen in the liver and its capacity to ameliorate inflammatory processes.

In animal liver glycogen studies, relative potencies of ARISTOCORT over cortisone of up to 40 to 1 have been observed. Compared to ARISTOCORT, five to 12 times the amount of prednisone is required to produce varying but equal amounts of glycogen deposition in the liver.[1]

Most patients show normal fasting blood sugars on ARISTOCORT. Diabetic patients on ARISTOCORT may require increased insulin dosage, and occasional latent diabetics may develop the overt disease.

Anti-inflammatory potency of ARISTOCORT was determined by both the asbestos pellet[1] and cottonball[9] tests. It was found to be nine to 10 times more effective than hydrocortisone in this respect.

Gastric acidity and pepsin

The precise mode of ulcerogenesis during treatment with corticosteroids is not known. There is much experimental evidence for believing this may be related to the tendency of these agents to increase gastric pepsin and acidity—and this cannot be abolished by vagotomy, anticholinergic drugs or gastric antral resection.[10] Clinical studies[11] of patients on ARISTOCORT revealed that uropepsin excretion is not elevated. Further, their basal acidity and gastric response to histamine stimulation were within normal limits.

Central nervous system

The tendency of corticosteroids to produce euphoria, nervousness, mental instability, occasional convulsions and psychosis is well known.[12] The mechanism underlying these disturbances is not well understood.

ARISTOCORT, on the contrary, does not produce a false sense of well being, insomnia or tension except in rare instances. In the treatment of 824 patients, for up to one year, not a single case of psychosis has been produced. In general, it appears to maintain psychic equilibrium without producing cerebral stimulation or depression.

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The Promise of Aristocort in Reduction of Side Effects

It is axiomatic to affirm that the undesirable collateral hormone effects of corticosteroids increase in frequency and severity the higher the dosage and the longer used.

It has also become well recognized that the most serious of the major side effects from long-term corticosteroid treatment are peptic ulcers, osteoporosis with fracture, drug psychosis and euphoria, and sodium and water retention leading often to general tissue edema and hypertension.

It is significant that of the close to 400 patients on the lower dosage schedules found effective in bronchial asthma and dermatologic conditions, only 1 case of peptic ulceration has developed. No other of the above side effects have been observed even though ARISTOCORT was administered continuously to them for periods as long as one year.

The treatment of rheumatoid arthritis with steroids appears to result in the highest incidence of side effects. For this reason, the side effects associated with ARISTOCORT therapy in 292 patients with rheumatoid arthritis are below compared to the reported incidence of those from prednisone and prednisolone.

Peptic Ulcer

The most recent study available on the incidence of peptic ulceration in patients with rheumatoid arthritis on long-term prednisone therapy reported 12 ulcers in 49 cases (24 per cent).[1] Lowest incidence of 6.5 per cent has been recorded in a group of patients on this drug for six to nine months.[2] Four of six ulcers, in another series of 39 patients on prednisone,[3] appeared in less than three months of therapy.

The occurrence of peptic ulcer in 292 patients with rheumatoid arthritis treated continuously for up to one year with ARISTOCORT is approximately 1 per cent (2 of the 3 occurred in patients transferred from prednisone). In the remaining 532 cases recently analyzed, only one ulcer has been discovered in a patient who apparently had no ulcer when he was changed from another steroid.

Osteoporosis and Compression Fractures

The incidence of compressed fractures of vertebrae—and to a lesser extent in other bones—is high in patients on prolonged therapy with all previous corticosteroids.[4] One group of 49 patients[1] on long-term prednisone treatment experienced nine vertebral fractures (18 per cent); another series of 39 developed eight fractures (20 per cent),[3] four to 15 months after the beginning of steroid administration.

The occurrence of osteoporosis with compression fracture in 292 patients with rheumatoid arthritis treated continuously for up to one year with ARISTOCORT is 0.33 per cent (1 case[5]). Although these results are encouraging, determination of the true incidence of osteoporosis will have to await the passage of more time.

Euphoria and Psychosis

The euphoria so commonly produced by all previous corticosteroids has seemed a most desirable attribute to patients. In penalty, however, they have often later to pay for this by mental disturbances, varying from mild and transitory to severe depression and psychosis,[4] and toxic syndromes producing even convulsions and death.[6]

Since the onset of these complications is not directly related to duration of steroid administration,[7] the fact that not one case of psychosis occurred in 824 patients treated with ARISTOCORT, is most encouraging.

Sodium Retention—Hypertension—Potassium Depletion

When 17 patients were changed from prednisone to ARISTOCORT, 11 rapidly lost weight although only one had had visible edema.[8] Sodium and water retention, hypokalemia or hyperkalemia and steroid hypertension did not appear in 194 rheumatoid arthritis patients treated with ARISTOCORT.[5,9]

The interrelation between blood and body sodium, and steroid hypertension has long been generally appreciated.[10,11] Except in rare instances, or when unusually high doses are used (e.g., leukemia), the problem of edema and hypertension caused by sodium and water retention, has been eliminated with ARISTOCORT.

Minor Side Effects

Collateral hormonal effects of less serious consequence occurred with approximately the same frequency as with the older corticosteroids.[5] These include erythema, easy bruising, acne, hypertrichosis, hot flashes and vertigo. Several investigators have reported symptoms not previously described as occurring with corticosteroid therapy, e.g., headaches, lightheadedness, tiredness, sleepiness and occasional weakness.

Moon facies and buffalo humping have been seen in some patients on ARISTOCORT. However, ARISTOCORT therapy, in many instances, resulted in diminution of "Cushingoid" signs induced by prior therapy. Where this occurs, it may be related to reduced dosage on which patients can be maintained.

Reduction of dosage by one-third to one-half

In a double-blind study of comparative dosage in patients with rheumatoid arthritis,[12] 70 per cent of the cases were as well controlled on a dose of ARISTOCORT one-half that of prednisone. A general recommendation can be made that ARISTOCORT be used in doses two-thirds that of prednisone or prednisolone in the treatment of rheumatoid arthritis. There are individual variations, however, and each patient should be carefully titrated to produce the desired amount of disease suppression.

Comparative studies, of patients changed from prednisone, indicate reduced dosage of ARISTOCORT in bronchial asthma and allergic rhinitis (33 per cent),[8] and in inflammatory and allergic skin diseases (33-50 per cent).[13,14]

General Precautions and Contraindications

Administration of ARISTOCORT has resulted in a lower incidence of the major serious side effects, and in fewer of the troublesome minor side effects known to occur with all previously available corticosteroids. However, since it is a highly potent glucocorticoid, with profound metabolic effects, all traditional contraindications to corticosteroid therapy should be observed.

No precautions are necessary in regard to dietary restriction of sodium or supplementation with potassium.

Since ARISTOCORT has less of the traditional side effects, the appearance of sodium and water retention, potassium depletion, or steroid hypertension cannot be used as signs of overdosage. As a rule patients will lose some weight during the first few days of treatment as a result of urinary output, but then the weight levels off.

Patients do not develop the abnormally voracious appetite common to previous corticosteroid administration. In fact, some patients experienced anorexia, and it is advisable to inform patients of this and to recommend they maintain a normal intake of food, with emphasis on liberal protein intake.

While precipitation of diabetes, peptic ulcer, osteoporosis, and psychosis can be expected to appear rarely from ARISTOCORT, they must be searched for periodically in patients on long-term steroid therapy.

Traditional precautions should be observed in gradually discontinuing therapy, in meeting the increased stress of operation, injury and shock, and in the development of intercurrent infection.

There is one overriding principle to be observed in the treatment of any disease with ARISTOCORT. *The amount of the drug used should be carefully titrated to find the smallest possible dose which will suppress symptoms.*

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The Promise of Aristocort in Rheumatoid Arthritis

ARISTOCORT *therapy has been intensely and extensively studied for periods up to one year on 292 patients with rheumatoid arthritis.*

Significant is the fact that most patients were *severe* arthritics, transferred to ARISTOCORT from other corticosteroids because satisfactory remission had not been attained, or because the seriousness of collateral hormonal effects had made discontinuance desirable.

Results of treatment

Freyberg and associates[1] treated 89 patients with rheumatoid arthritis (A. R. A. Class II or III and Stage II or III). Of these, 51 were on ARISTOCORT therapy from three to over 10 months. In all but a few patients, satisfactory suppression of rheumatoid activity was obtained with 10 mg. per day. Thirteen were controlled on 6 mg. or less a day, and for periods to 180 days. The investigators reported therapeutic effect in most cases to be A. R. A. Grade II (impressive) and that marked reduction in sedimentation rates occurred.

Another interesting observation in this study: Of the 89 patients treated, 12 had active ulcers, developed from prior steroid therapy. *In six patients, the ulcers healed while on doses of* ARISTOCORT *sufficient to control arthritic symptoms.*

Hartung[2] treated 67 cases of rheumatoid arthritis for up to 10 months. He found the optimum maintenance dose to be 11 mg. per day. Nineteen of these patients were treated for six to 10 months with an "excellent" therapeutic response.

Dosage and course of therapy

The initial dosage range recommended is 14 to 20 mg. per day—depending on the severity and acuteness of signs and symptoms. Dosage is divided into four parts and given with meals and at bedtime. Anti-rheumatic effect may be evident as early as eight hours, and full response often obtained within 24 hours. This dosage schedule should be continued for two or three days, or until all acute manifestations of the disease have subsided, whichever is later.

The maintenance level is arrived at by reduction of the total daily dosage in decrements of 2 mg. every three days. The range of maintenance therapy has been found to be from 2 mg. to 15 mg. per day—with only a very occasional patient requiring as much as 20 mg. per day. Patients requiring more than this should not be long continued on steroid therapy.

The aim of corticosteroid therapy in rheumatoid arthritis is to suppress the disease only to the stage which will enable the patient to carry out the required activities of normal living or to obtain reasonable comfort. The maintenance dose of ARISTOCORT to achieve this end is arrived at while making full use of all other established methods of controlling the disease.

ARISTOCORT is available in 2 mg. scored tablets (pink); 4 mg. scored tablets (white). Bottles of 30.

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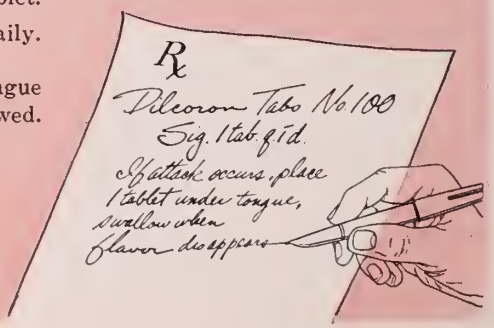


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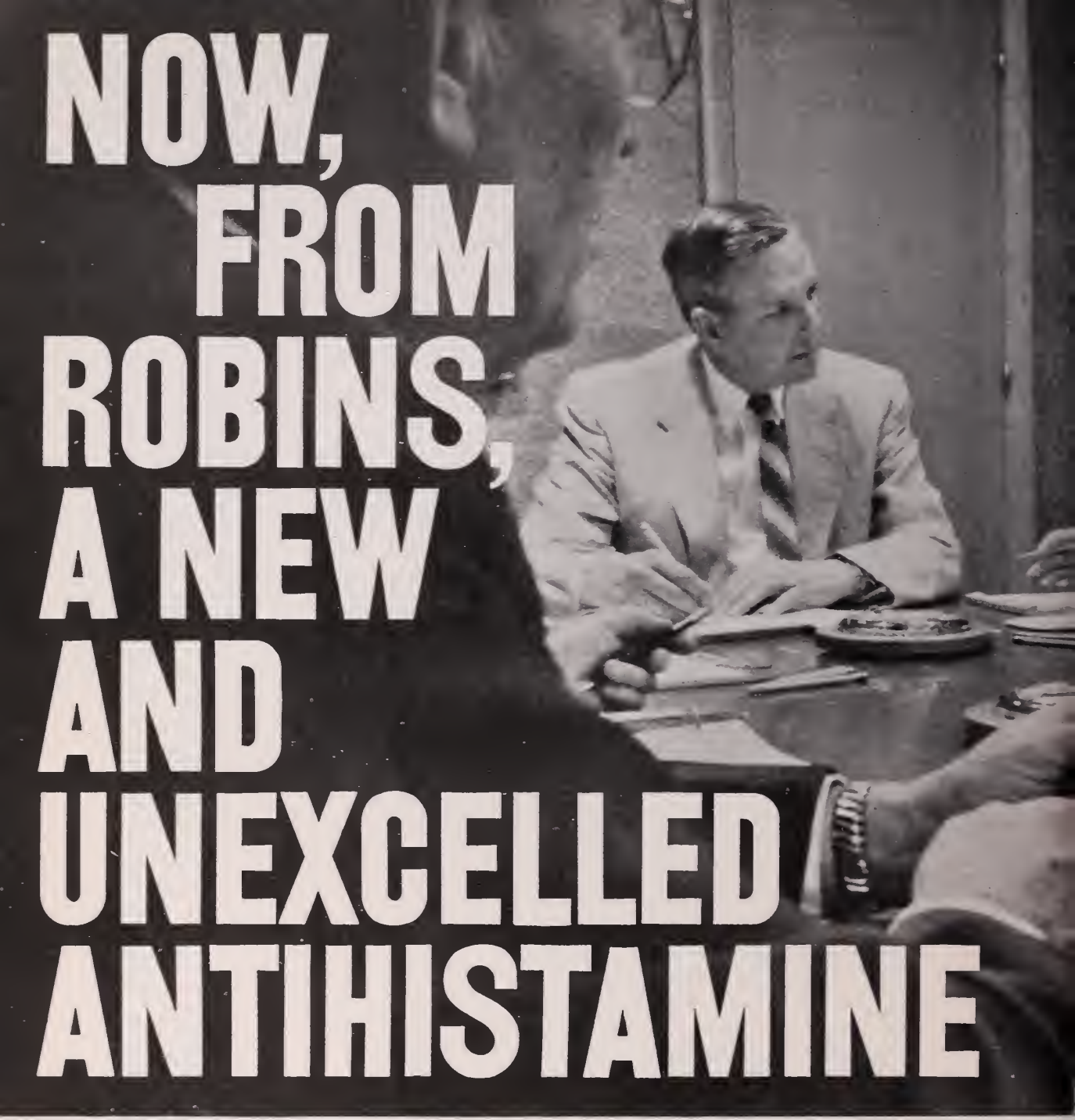
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Bronchial asthma	1		1			
Pruritus	1		1			
Total	37	15	13	7	2	Drowsiness (5) Dizzy (1) 16.2

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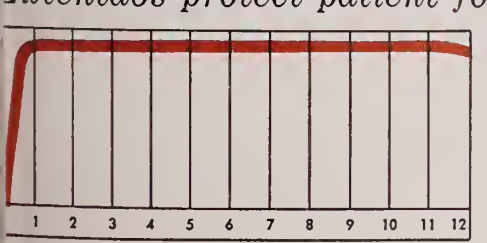
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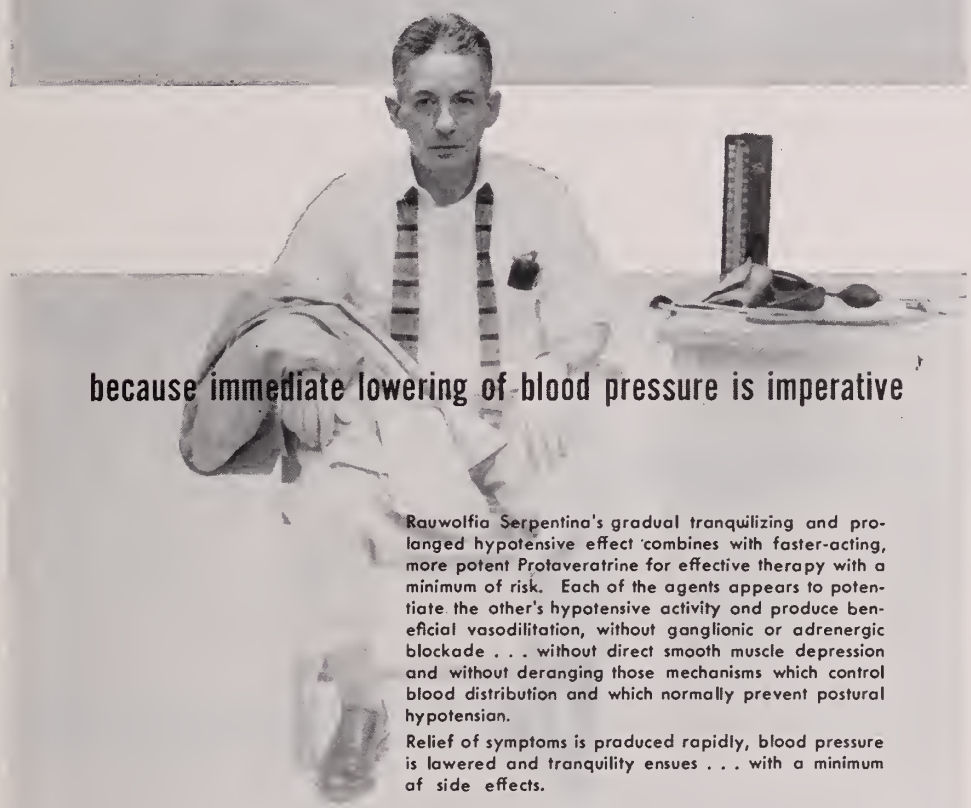
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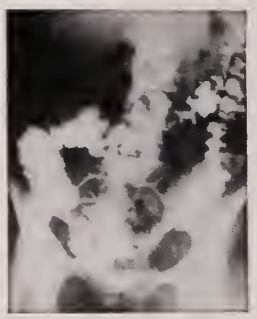
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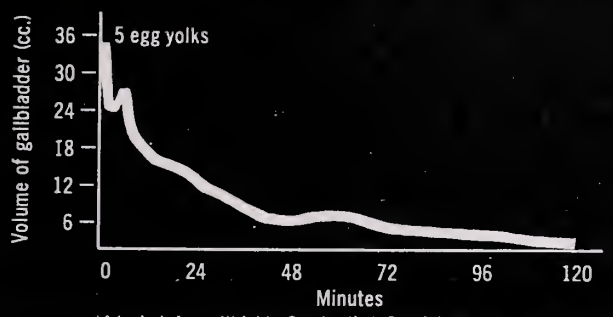


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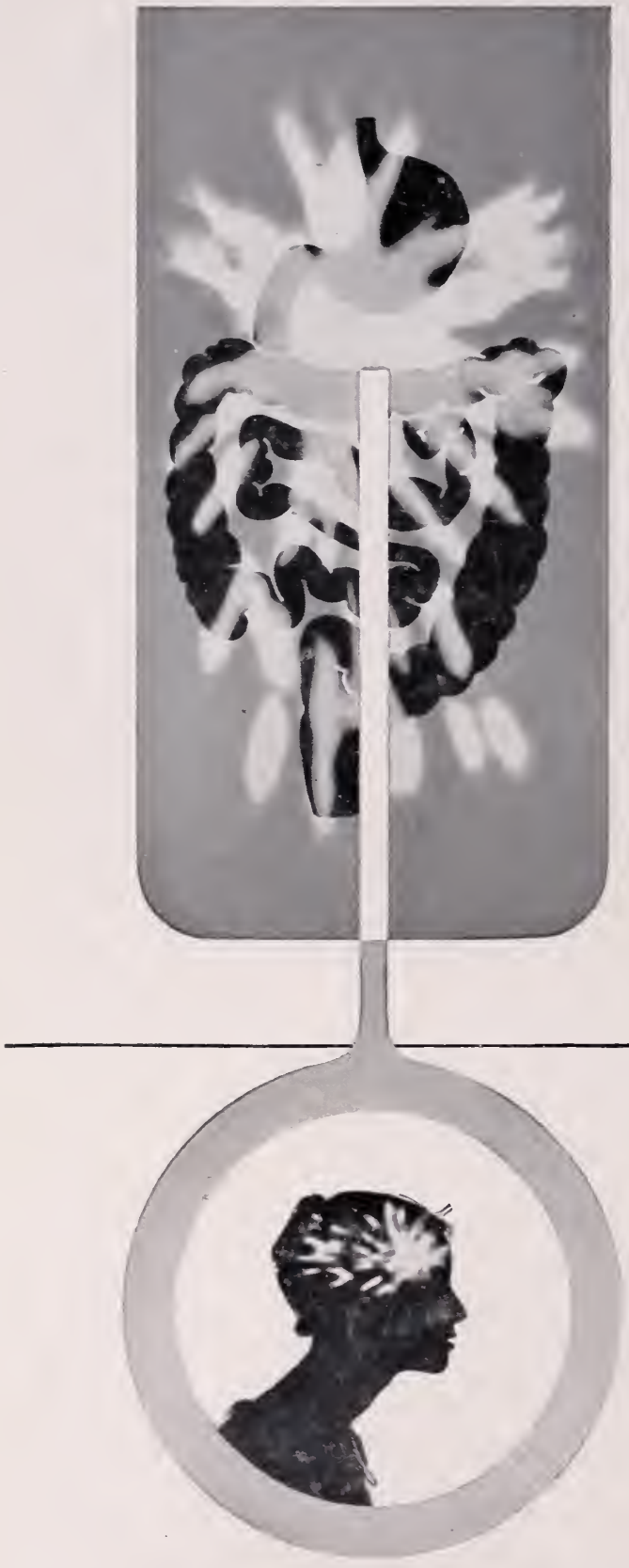
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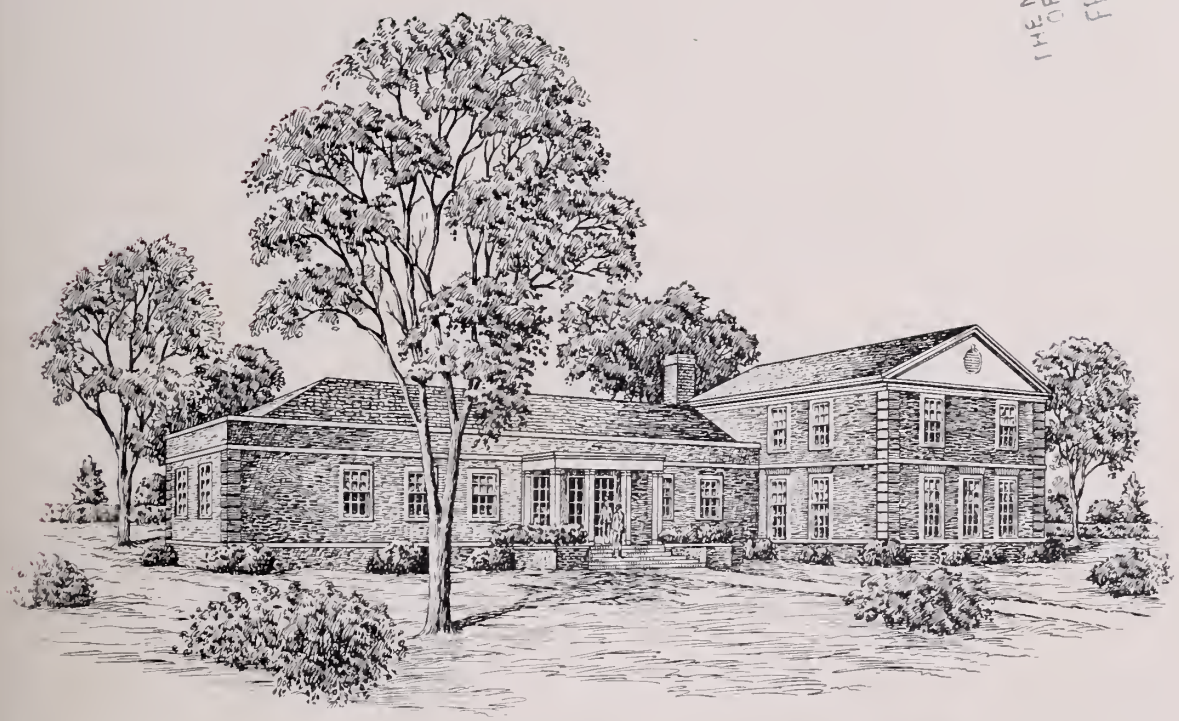
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REFERENCES (1) Woolington, S. S.; Adler, S. J., & Bower, A. G., in Welch, H., & Marti-Ibanez, F.: Antibiotics Annual 1956-1957, New York, Medical Encyclopedia, Inc., 1957, p. 365. (2) Ditmore, D. C., & Lind, H. E.: *Am. J. Gastroenterol.* 28:378, 1957. (3) Hasenclever, H. F.: *J. Iowa M. Soc.* 47:136, 1957. (4) Waisbren, B. A., & Strelitzer, C. L.: *Arch. Int. Med.* 99:744, 1957. (5) Holloway, W. J., & Scott, E. G.: *Delaware M. J.* 29:159, 1957. (6) Rhoads, P. S.: *Postgrad. Med.* 21:563, 1957. (7) Petersdorf, R. G.; Bennett, I. L., Jr., & Rose, M. C.: *Bull. Johns Hopkins Hosp.* 100:1, 1957. (8) Royer, A.: Changes in Resistance to Various Antibiotics of Staphylococci and Other Microbes, paper presented at Fifth Ann. Symp. on Antibiotics, Washington, D. C., Oct. 2-4, 1957. (9) Doniger, D. E., & Parenteau, Sr. C. M.: *J. Maine M. A.* 48:120, 1957. (10) Josephson, J. E., & Butler, R. W.: *Canad. M. A. J.* 77:567 (Sept. 15) 1957.

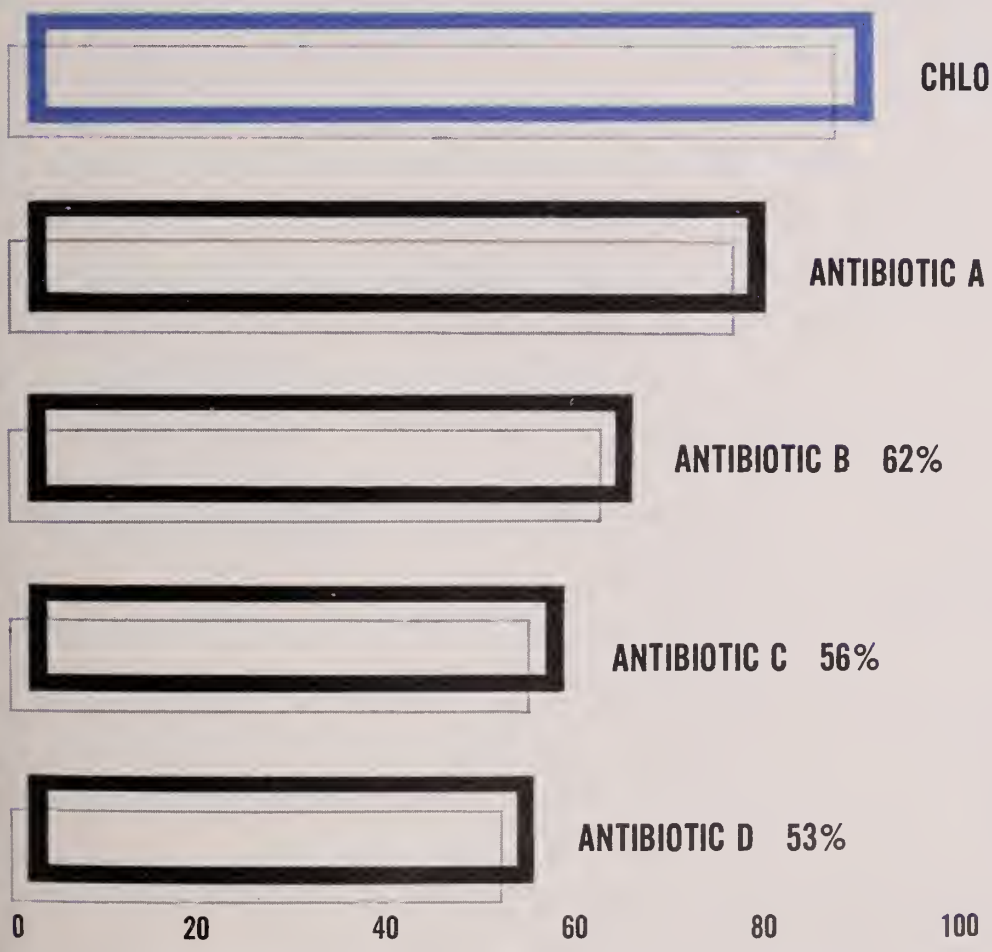
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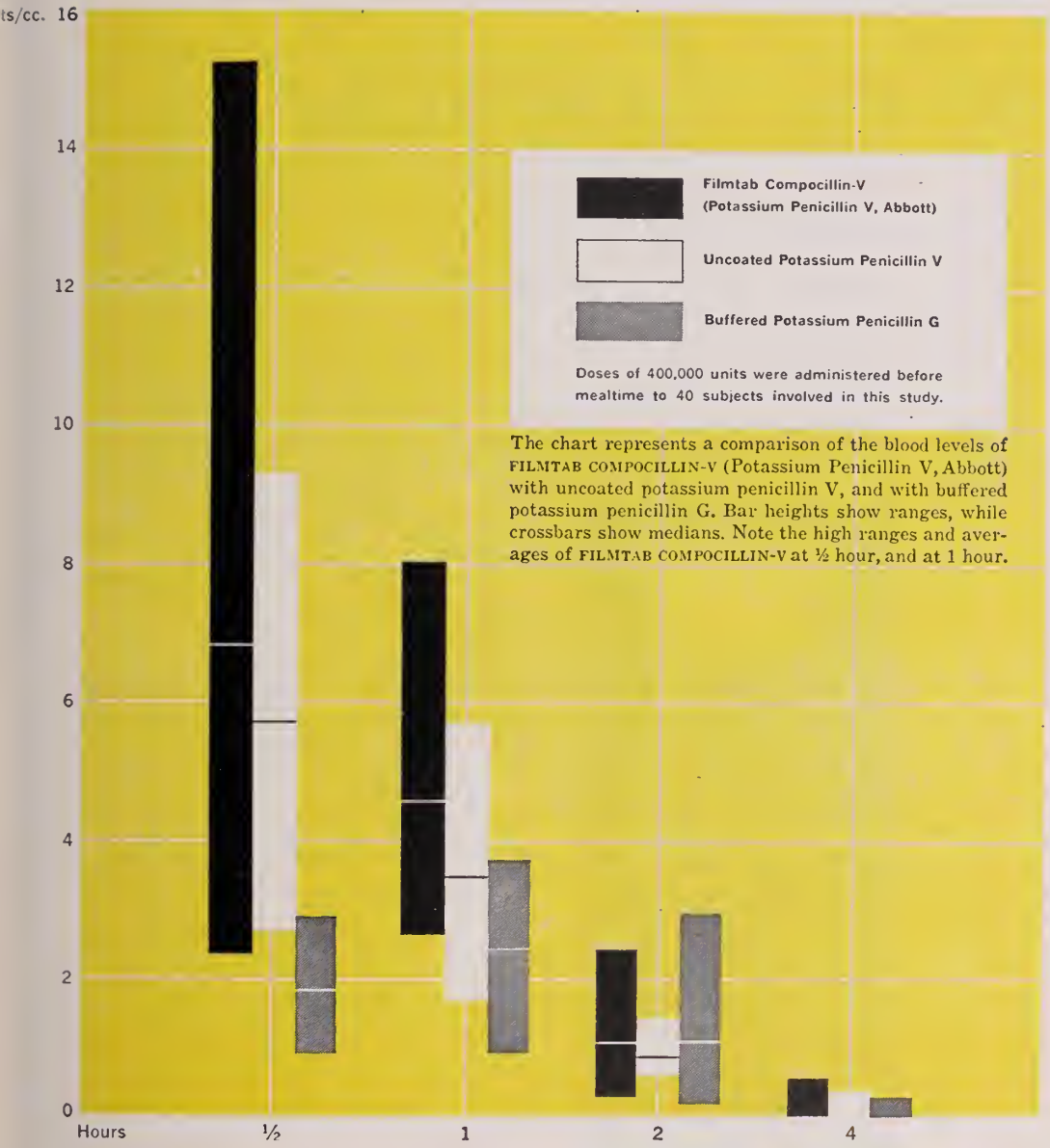
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—IN EASY-TO-SWALLOW FILMTABS AND TASTY, ORAL SUSPENSION



The chart represents a comparison of the blood levels of FILMTAB COMPOCILLIN-V (Potassium Penicillin V, Abbott) with uncoated potassium penicillin V, and with buffered potassium penicillin G. Bar heights show ranges, while crossbars show medians. Note the high ranges and averages of FILMTAB COMPOCILLIN-V at ½ hour, and at 1 hour.

Now, with *Filmtab* COMPOCILLIN-V, patients get (and within minutes) fast, high penicillin concentrations. Note the blood level chart.

COMPOCILLIN-V is indicated whenever penicillin therapy is desired. It comes in two highly-acceptable forms. *Filmtab* COMPOCILLIN-V offers two therapeutic dosages (125 and 250 mg.). Patients find *Filmtabs* tasteless, odorless and easy-to-swallow. For children, COMPOCILLIN-V comes in a tasty, banana-flavored suspension. It's ready-mixed – stays stable for at least 18 months.

Abbott

Spontin®

(Ristocetin, Abbott)

and when coccal infections hospitalize the patient



802070

Indications

SPONTIN is indicated for treating gram-positive bacterial infections. Clinical reports have indicated its effectiveness against a wide range of staphylococcal, streptococcal and pneumococcal infections. It can be considered a drug of choice for the immediate treatment of serious infections caused by organisms resistant to other antibiotics.

Dosage

Recommended dosage depends on the sensitivity of the microorganism and on the severity of the disease under treatment. For pneumococcal and streptococcal infections, a dosage of 25 mg./Kg. per day will usually be adequate. Majority of staphylococcal infections will be controlled by 25 to 50 mg./Kg. per day. However, in endocarditis due to relatively resistant strains or where vegetations or abscesses occur, dosages as high as 75 mg./Kg. per day may be used. It is recommended that the daily dosages be divided into two or three equal parts at eight- or twelve-hour intervals.

Supplied

SPONTIN is supplied as a sterile, lyophilized powder, in vials representing 500 mg. of ristocetin activity.

A LIFESAVING ANTIBIOTIC AFTER OTHER ANTIBIOTICS HAD FAILED



SPONTIN comes to the medical profession with a clinical history of dramatic results – cases where the patients were given little chance of survival.

During these careful, clinical investigations, lives were saved after weeks (and sometimes months) of antibiotic failures. These were the cases where the infecting organisms had become resistant to present-day therapy. And, just as important, were the good results found against a wide range of gram-positive coccal infections.

Essentially, SPONTIN is a drug for hospital use, for patients with potentially dangerous infections. In its present form, SPONTIN is administered intravenously using the drip technique. Dosage may be dissolved in 5% dextrose in water or in any isotonic or hypotonic saline solution. Some of the important therapeutic points of SPONTIN include:

1. successful short-term therapy for acute or subacute endocarditis
2. new antimicrobial activity – no natural resistance to SPONTIN was found in tests involving hundreds of coccal strains
3. antimicrobial action against which resistance is rare – and extremely difficult to induce
4. bactericidal action at effective therapeutic dosages.

SPONTIN is truly a lifesaving antibiotic. It could save the life of one of your patients – does your hospital have it stocked?

Abbott



Published reports confirm—

BETTER PAIN RELIEF

than with a standard APC formula. . .*

Phenaphen®

Robins

In a recent controlled study,* Phenaphen was found more effective than a standard aspirin-phenacetin-caffeine formula for relief of moderate to severe pain . . . with total freedom from side effects and from any tendency to induce drowsiness.

*Murray, R. J.: N. Y. State Jl. Med. 53:1867, 1953.

Each PHENAPHEN capsule contains —

Acetylsalicylic Acid (2½ gr.) .	162 mg.
Phenacetin (3 gr.)	194 mg.
Phenobarbital (¼ gr.)	16.2 mg.
Hyoscyamine Sulfate	0.031 mg.

Also available —

PHENAPHEN with CODEINE PHOSPHATE ¼ GR.
Phenaphen No. 2

PHENAPHEN with CODEINE PHOSPHATE ½ GR.
Phenaphen No. 3

PHENAPHEN with CODEINE PHOSPHATE 1 GR.
Phenaphen No. 4

Robins

A. H. ROBINS CO. Inc. RICHMOND 20, VA.

Ethical Pharmaceuticals of Merit since 1878

New...from Pfizer Research

84

compounds tested

1

compound unexcelled

Progress has been made in antibiotic therapy through the use of absorption-enhancing agents, resulting in higher, more effective antibiotic blood levels.

For the past two years, in a continuing search for more effective agents for enhancing oral antibiotic blood levels, our Research Laboratories screened eighty-four adjuvants, including sorbitol, citric acid, sodium hexametaphosphate, and other organic acids and chelating agents as well as phosphate complex and other analogs. After months of intensive comparative testing, glucosamine proved to be the absorption-enhancing agent of choice. Here's why:

1 Crossover tests show that average blood levels achieved with glucosamine were markedly higher than those of other enhancing agents screened. In some cases this effect was more than double.

2 Of great importance to the practicing physician is the consistency of the blood level enhancement achieved with glucosamine. Extensive tests show that the enhancing effect with glucosamine occurs in a greater percentage of cases than with any other agent screened.

3 Glucosamine is a nontoxic physiologic metabolite occurring naturally and widely in human secretions, tissues and organs. It is nonirritating to the stomach, does not increase gastric secretion, is sodium free and releases only four calories of energy per gram. Also, there is evidence that glucosamine may favorably influence the bacterial flora of the intestinal tract.

For these reasons glucosamine provides you with an important new adjuvant for better enhancement of antibiotic blood levels. Tetracycline, potentiated physiologically with glucosamine, is now available to you as COSA-TETRACYN.

Capsules 250 mg. and 125 mg.

COSA-TETRACYN*

GLUCOSAMINE-POTENTIATED TETRACYCLINE

The most widely used broad-spectrum antibiotic now potentiated with glucosamine, the enhancing agent of choice

*Trademark

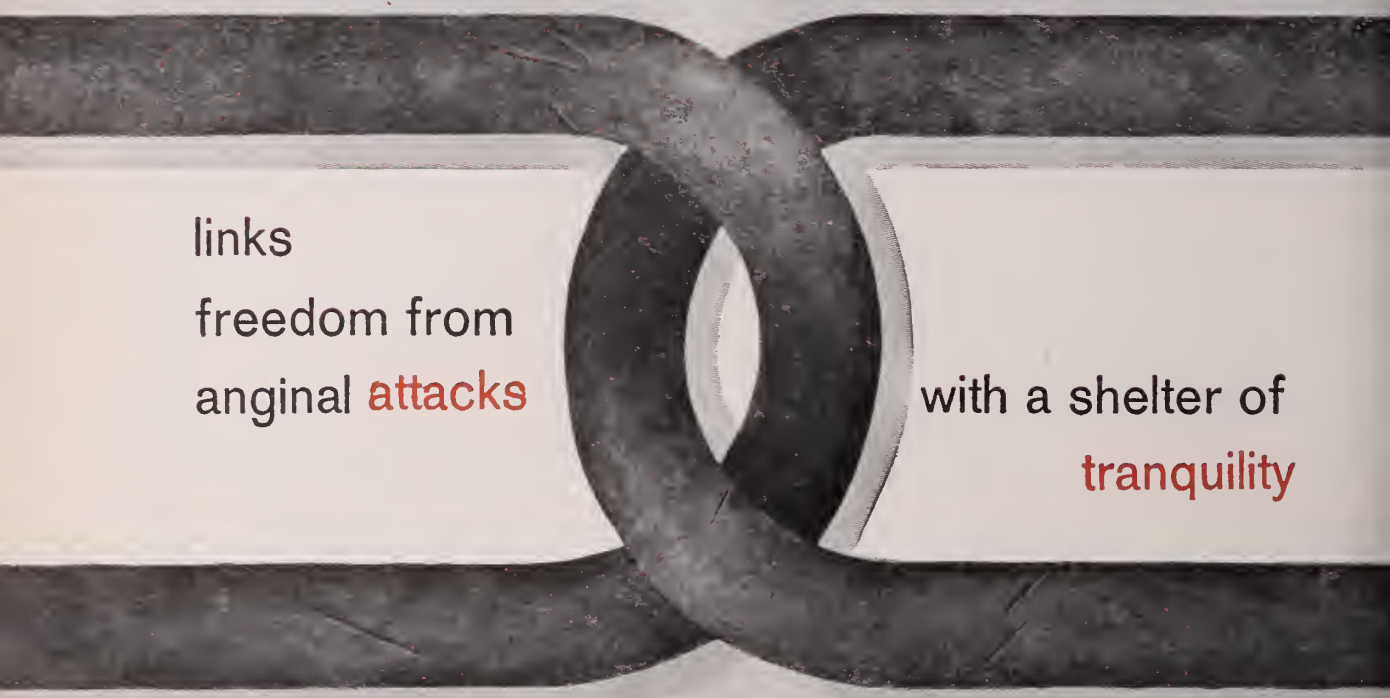
Pfizer

PFIZER LABORATORIES
Division, Chas. Pfizer & Co., Inc.
Brooklyn 6, N. Y.

new for angina

PETN + ATARAX®
(PENTAERYTHRITOL TETRANITRATE) (HYDROXYZINE)

CARTRAX*



links
freedom from
anginal attacks

with a shelter of
tranquility

In pain. Anxious. Fearful. On the road to cardiac invalidism. These are the pathways of angina patients. For fear and pain are inexorably linked in the angina syndrome.

For angina patients—perhaps the next one who enters your office—won't you consider new CARTRAX? This doubly effective therapy combines PETN (pentaerythritol tetranitrate) for lasting vasodilation and ATARAX for peace of mind. Thus CARTRAX relieves not only the anginal pain but reduces the concomitant anxiety.

Dosage and supplied: begin with 1 to 2 yellow CARTRAX "10" tablets (10 mg. PETN plus 10 mg. ATARAX) 3 to 4 times daily. When indicated, this may be increased for more optimal effect by switching to pink CARTRAX "20" tablets (20 mg. PETN plus 10 mg. ATARAX.) For convenience, write "CARTRAX 10" or "CARTRAX 20." In bottles of 100. CARTRAX should be taken 30 to 60 minutes *before* meals, on a continuous dosage schedule. Use PETN preparations with caution in glaucoma.

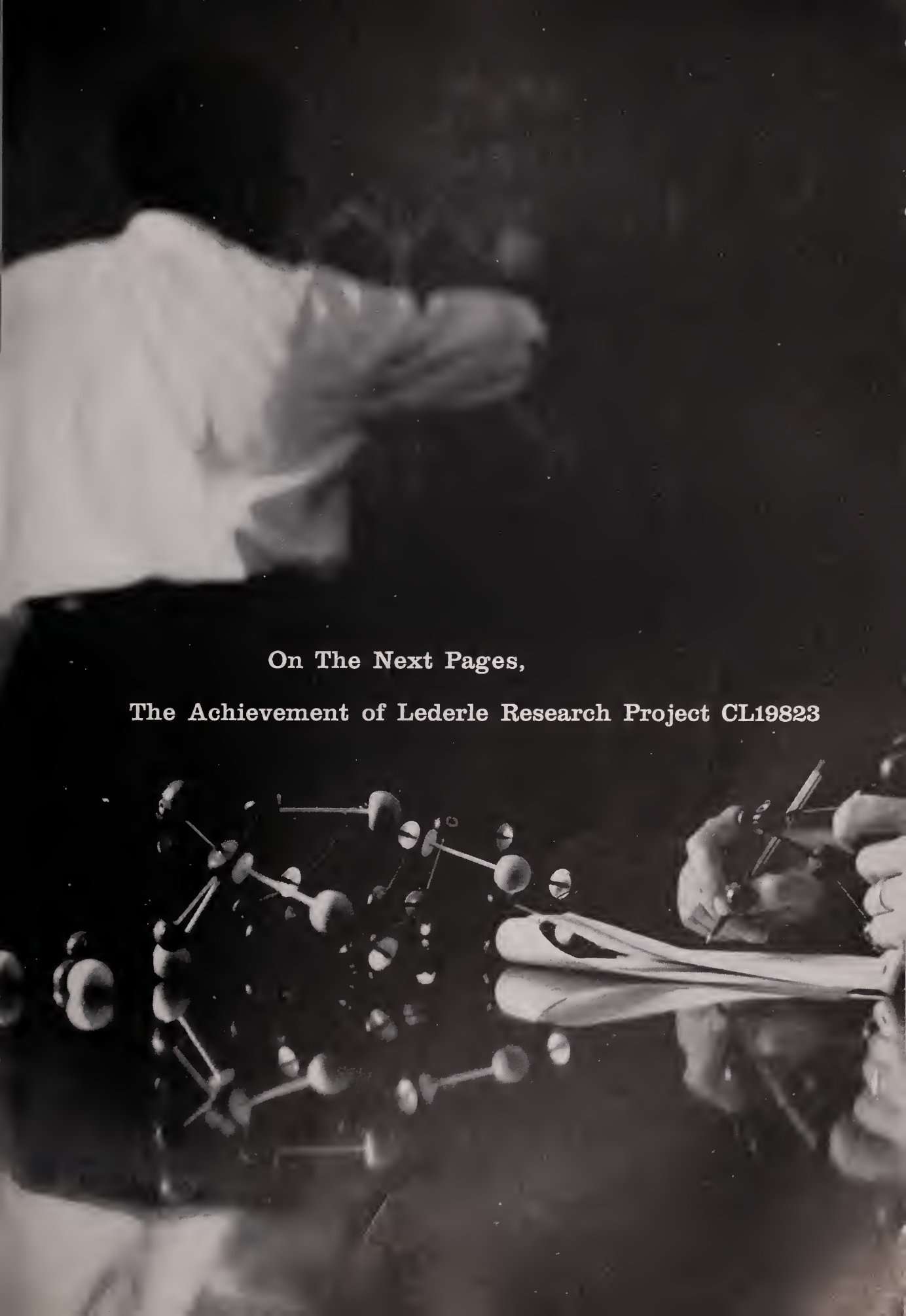
"Cardiac patients who show significant manifestations of anxiety should receive ataractic treatment as part of the therapeutic approach to the cardiac problem."[1]

1. Waldman, S., and Pelner, L.: Am. Pract. & Digest Treat. *8*:1075 (July) 1957.

*TRADEMARK

ROERIG

New York 17, New York
Division, Chas. Pfizer & Co., Inc.



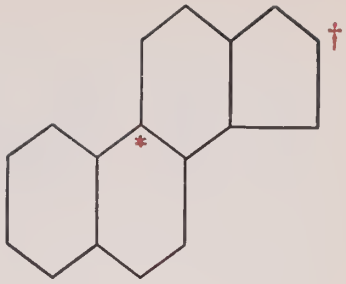
On The Next Pages,

The Achievement of Lederle Research Project CL19823

Lederle announces a major drug with great new promise

Arist

a new corticosteroid created to minimize the
major deterrents to all previous steroid therapy



ocort®

Triamcinolone LEDERLE
9 alpha-fluoro-16 alpha-hydroxyprednisolone

Lederle

- **a new high** in anti-inflammatory effects with lower dosage (averages 1/3 less than prednisone)
- **a new low** in the collateral hormonal effects associated with all previous corticosteroids
  - No sodium or water retention
  - No potassium loss
  - No interference with psychic equilibrium
  - Lower incidence of peptic ulcer and osteoporosis

LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK

HASKELL'S

CCH

HASAMAL

a carefully formulated analgesic-sedative. For effective symptomatic relief in the treatment of colds and less severe types of respiratory tract infections. The presence of phenobarbital is of value in nervous and apprehensive patients and in those cases where mild sedation is desired.



Each HASAMAL tablet or capsule contains:

Phenobarbital ..... 16.2 mg. (¼ gr.)
Warning: May be habit-forming
Acetylsalicylic Acid ..... 162.5 mg. (2½ gr.)
Acetophenetidin ..... 162.5 mg. (2½ gr.)
Atropine Sulfate ..... 0.00065 mg.
Hyoscine Hydrobromide ..... 0.0011 mg.
Hyoscyamine Hydrobromide .... 0.0325 mg.

HASACODE

When severe pain demands more potent measures, Hasacode provides the actions of Hasamal, plus codeine. Available in 2 codeine strengths, ¼ gr. (Hasacode) and ½ gr. (Hasacode "Strong").



Supplied: Hasamal — Tablets or capsules, bottles of 100, 500 and 1,000. Hasacode and Hasacode "Strong" — bottles of 100 and 500 tablets.

Write for free samples and literature.

CHARLES C. HASKELL & CO., INC., Richmond, Virginia

NOW...A NEW TREATMENT

'CARDILATE'*

for THE PROPHYLAXIS OF ANGINA PECTORIS

'Cardilate' tablets  shaped for easy retention in the buccal pouch

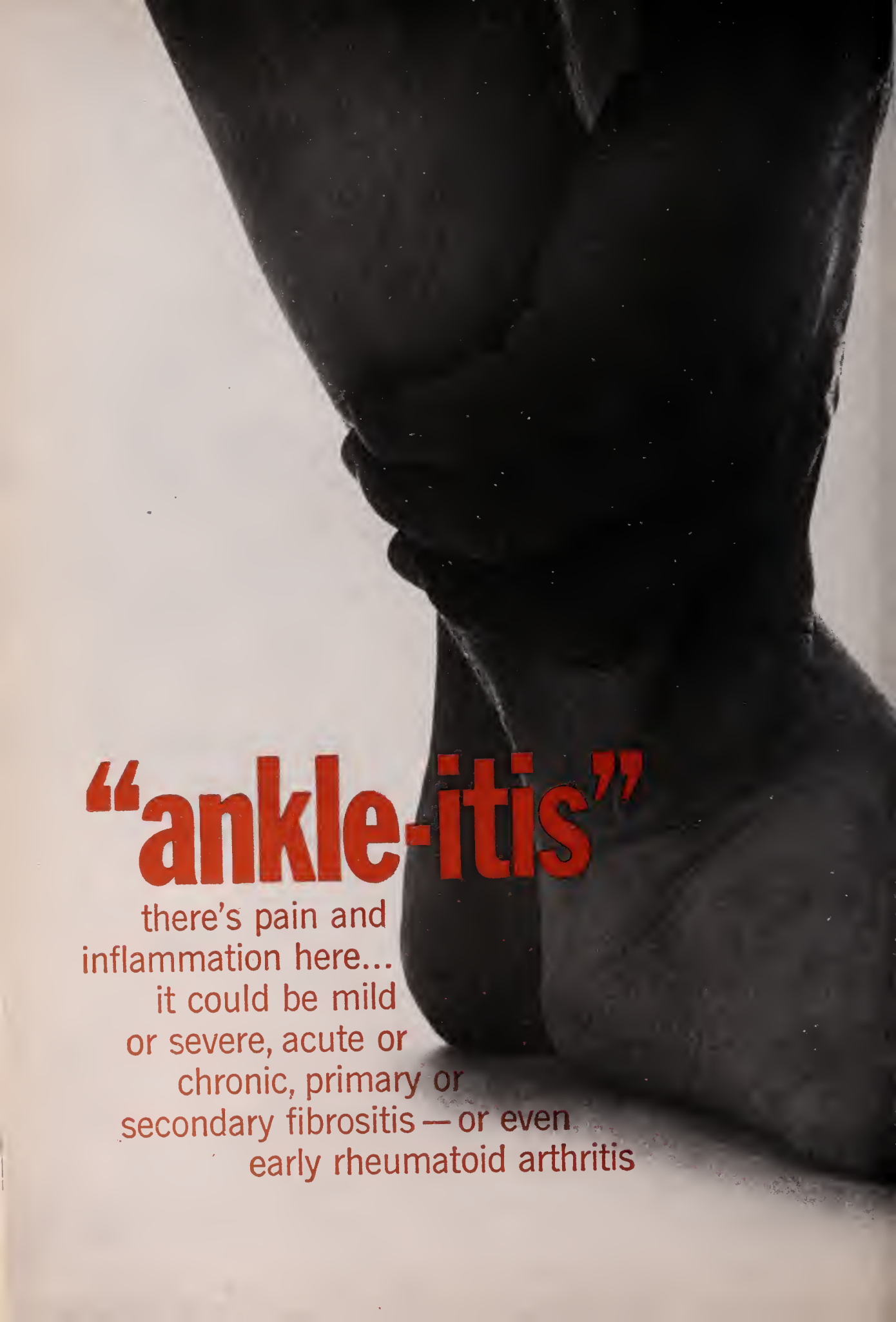
"... the degree of increase in exercise tolerance which sublingual erythrol tetranitrate permits, approximates that of nitroglycerin, amyl nitrite and octyl nitrite more closely than does any other of the approximately 100 preparations tested to date in this laboratory."

"Furthermore, the duration of this beneficial action is prolonged sufficiently to make this method of treatment of practical clinical value."

Riseman, J. E. F., Altman, G. E., and Koretsky, S.: Nitroglycerin and Other Nitrites in the Treatment of Angina Pectoris, Circulation (Jan.) 1958.

* "Cardilate' brand Erythrol Tetranitrate SUBLINGUAL TABLETS, 15 mg. scored

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, New York


"ankle-itis"
there's pain and
inflammation here...
it could be mild
or severe, acute or
chronic, primary or
secondary fibrositis — or even
early rheumatoid arthritis

more potent and comprehensive treatment than salicylate alone

assured anti-inflammatory effect of low-dosage corticosteroid[1] . . . additive antirheumatic action of corticosteroid plus salicylate[2-5] brings rapid pain relief; aids restoration of function . . . wide range of application including the entire fibrositis syndrome as well as early or mild rheumatoid arthritis

more conservative and manageable than full-dosage corticosteroid therapy—

much less likelihood of treatment-interrupting side effects[1-6] . . . reduces possibility of residual injury . . . simple, flexible dosage schedule

THERAPY SHOULD BE INDIVIDUALIZED

acute conditions: Two or three tablets four times daily. After desired response is obtained, gradually reduce daily dosage and then discontinue.

subacute or chronic conditions: Initially as above. When satisfactory control is obtained, gradually reduce the daily dosage to minimum effective maintenance level. For best results administer after meals and at bedtime.

precautions: Because SIGMAGEN contains prednisone, the same precautions and contraindications observed with this steroid apply also to the use of SIGMAGEN.



in any case it calls for

Sigmagen®

corticoid-salicylate compound tablets

Composition

METICORTEN® (prednisone)	0.75 mg.
Acetylsalicylic acid	325 mg.
Aluminum hydroxide	75 mg.
Ascorbic acid	20 mg.

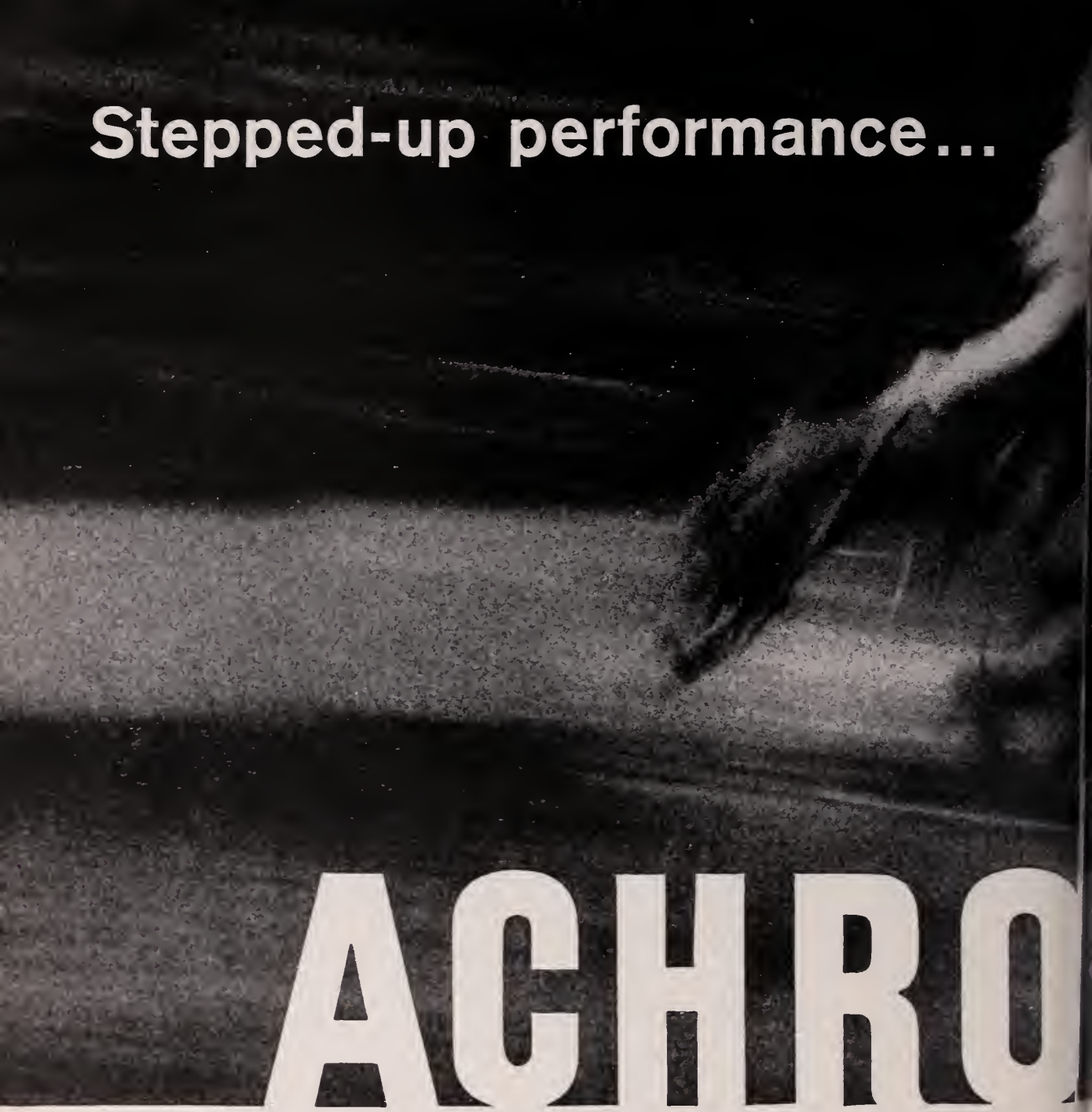
Packaging: SIGMAGEN Tablets, bottles of 100 and 1000.

References: 1. Spies, T. D., et al.: J.A.M.A. 159:645, 1955. 2. Spies, T. D., et al.: Postgrad. Med. 17:1, 1955. 3. Gelli, G., and Della Santa, L.: Minerva Pediat. 7:1456, 1955. 4. Guerra, F.: Fed. Proc. 12:326, 1953. 5. Busse, E. A.: Clin. Med. 2:1105, 1955. 6. Sticker, R. B.: Panel Discussion, Ohio State M. J. 52:1037, 1956.

Schering

SG-J-618

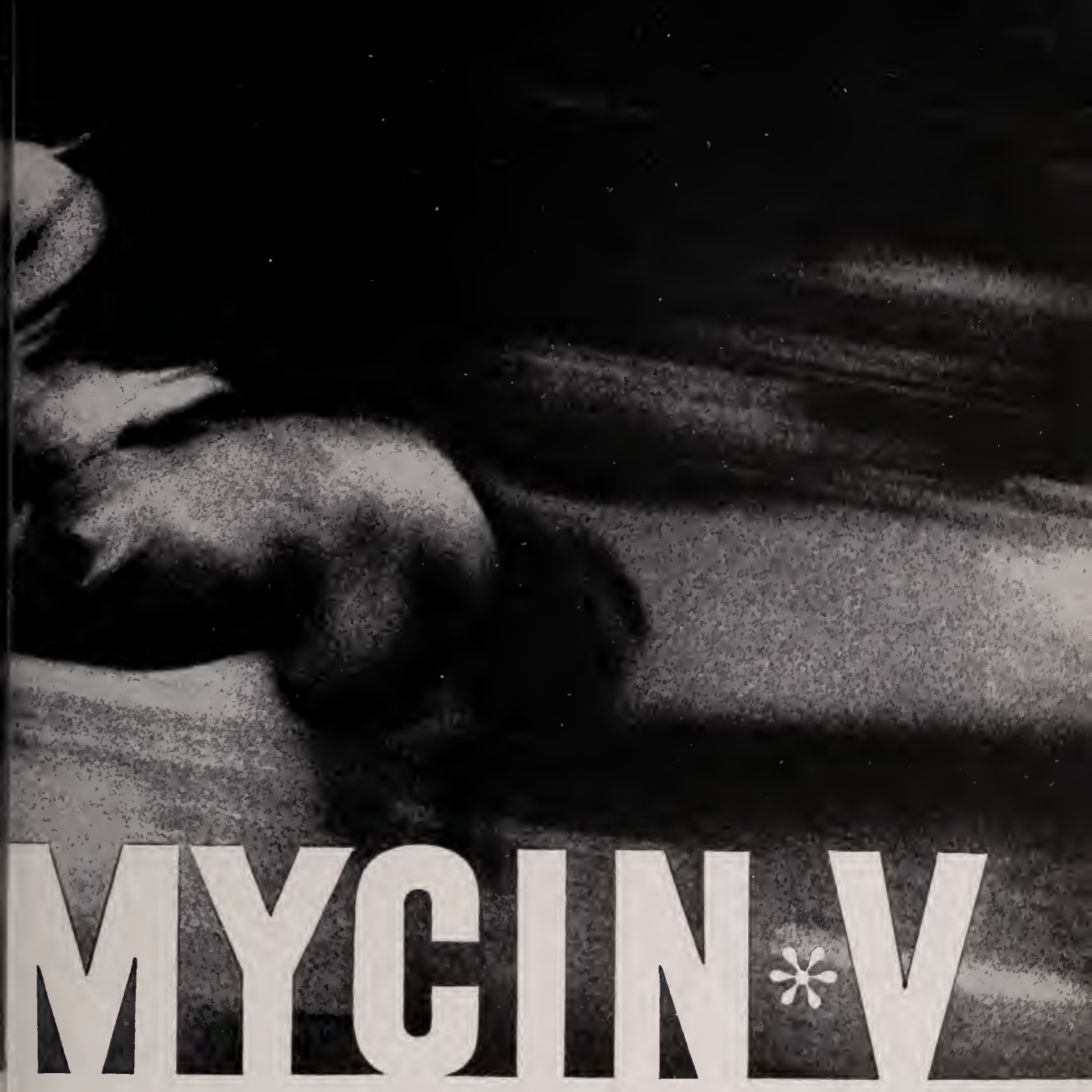
Stepped-up performance...



ACHRO

New rapid-acting ACHROMYCIN V Capsules offer more patients consistently high blood levels—at no sacrifice to the broad anti-infective spectrum of ACHROMYCIN Tetracycline, its low incidence of side effects, or its dosage and indications.

The pure, unaltered crystalline tetracycline HCl molecule of ACHROMYCIN, now buffered with citric acid, provides



Tetracycline HCl Buffered with Citric Acid

prompt and high blood levels, faster broad-spectrum action ...rapidly decisive control of infections. New ACHROMYCIN V Capsules do not contain sodium.

REMEMBER THE V WHEN SPECIFYING ACHROMYCIN V

CAPSULES: (blue-yellow) 250 mg. tetracycline HCl (buffered with citric acid, 250 mg.); 100 mg. tetracycline HCl (buffered with citric acid, 100 mg.). **ACHROMYCIN V DOSAGE:** Recommended basic oral dosage is 6-7 mg. per lb. body weight per day. In acute, severe infections often encountered in infants and children, the dose should be 12 mg. per lb. body weight per day. Dosage in the average adult should be 1 Gm. divided into four 250 mg. doses.

LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK Lederle

*Reg. U.S. Pat. Off.

RELIEF 1



2



FROM INFECTION*

FROM IRRITATION

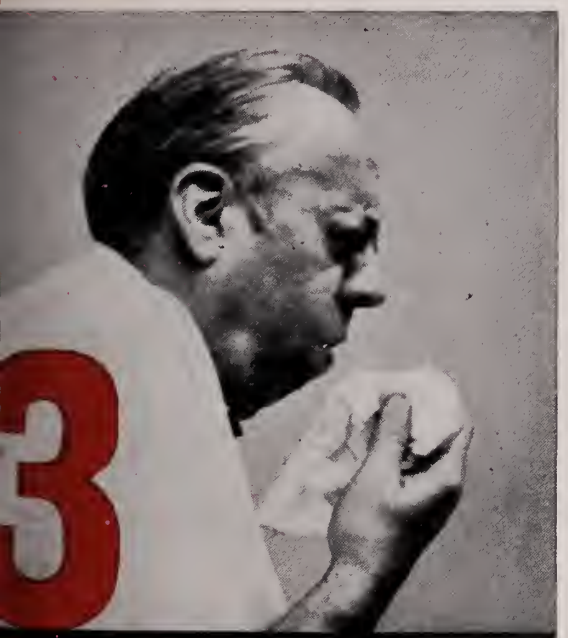
*as adjunctive therapy only

THE FIRST TROCHE TO PROVIDE THREEFOLD BENEFITS

'PENTAZETS'

TROCHES

NON-NARCOTIC ANTITUSSIVE EFFICACY SHOWN TO APPROXIMATE THAT OF CODEINE



ND **NOW** COUGH CONTROL TOO

With the addition of a non-narcotic antitussive to troche medication, 'PENTAZETS' provides a new and extended therapeutic advantage in this convenient form of treatment.

Treatment of the cough too, so often a troublesome symptom of sore throat, combined with wide-range antibiotic activity and soothing analgesic benefit, now offers *three*fold relief in a variety of throat irritations.

And 'PENTAZETS' are pleasant-tasting, too, making them highly acceptable, especially to children.

'PENTAZETS' contains:

• *Homarylamine*—a new non-narcotic antitussive with cough control shown to approximate that of codeine. • *Bacitracin-Tyrothricin-Neomycin*—a combined antibiotic treatment against many pathogenic organisms with little danger of unfavorable side effects. • *Benzocaine*—a local anesthetic for soothing relief to inflamed tissues. Being slowly absorbed, it is especially beneficial for prolonged effect and benefit to surrounding areas.

Supplied: Vials of 12.

Each 'PENTAZETS' troche contains:

Homarylamine hydrochloride	20 mg.
Zinc Bacitracin	50 units
Tyrothricin	1 mg.
Neomycin sulfate (equivalent to 3.5 mg. neomycin base)	5 mg.
Benzocaine	5 mg.



MSD

MERCK SHARP & DOHME

DIVISION OF MERCK & CO., INC., PHILADELPHIA 1, PA.

PENTAZETS is a trademark of Merck & Co., Inc.

in cases of tension

Serpate®

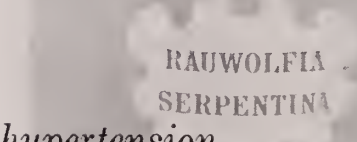
(Reserpine, Vale)

. . . the preferred drug where anxiety or emotional agitation must be controlled

. . . provides sedation without hypnasis, a sense of relaxed well being and tranquility

. . . effects a gradual and sustained lowering af elevated blood pressure in patients with mild, labile or essential hypertensian

supplied: 0.1 mg. and 0.25 mg. tablets in battles af 100, 500 and 1000, or on prescription at leading pharmacies



in cases of hypertension

Rauval®

(Rauwolfia Serpentina, Vale)

. . . double assayed to insure optimal therapeutic effect

tested chemically to insure total alkaloid content

tested biologically to insure uniform hypotensive action

. . . ideal therapy in labile and moderate hypertension or os odjunctive therapy in severe hypertension

. . . achieves gradual lowering of the blood pressure, gentle sedation, tranquilization with prolonged effect even after cessatian af therapy

supplied: 50 mg. and 100 mg. tablets in battles af 100 and 1000, ar on prescriptian at leading pharmacies

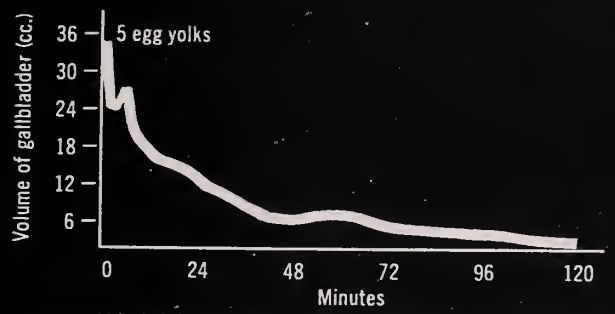
VALE **THE VALE CHEMICAL COMPANY, INC.** *allentown, pa.*

PHARMACEUTICALS

AN AMES CLINIQUICK

CLINICAL BRIEFS FOR MODERN PRACTICE

"EMPTYING" OF GALLBLADDER AFTER FATTY MEAL*



*Adapted from Wright, S.: Applied Physiology, ed. 8, London, Oxford University Press, 1947, p. 734.

What's wrong with the term "emptying of the gallbladder"?

The gallbladder discharges bile by fractional evacuation. It is not emptied completely at any one time even following a fatty meal.

Source—Lichtman, S. S.: Diseases of the Liver, Gallbladder and Bile Ducts, ed. 3, Philadelphia, Lea & Febiger, 1953, vol. 2, p. 1177.

routine physiologic support for "sluggish" older patients

DECHOLIN® one tablet t.i.d.
therapeutic bile

increases bile flow and gallbladder function—combats bile stasis and concentration... helps thin gallbladder contents.

corrects constipation without catharsis—prevents colonic dehydration and hard stools... provides effective physiologic stimulant.

DECHOLIN tablets (dehydrocholic acid, AMES) 3¾ gr. Bottles of 100 and 500.

AMES COMPANY, INC • ELKHART, INDIANA
Ames Company of Canada, Ltd., Toronto 44658



in peptic ulcer

Results with "... antacid therapy with DAA are essentially the same as ... with potent anticholinergic drugs."

Alglyn®

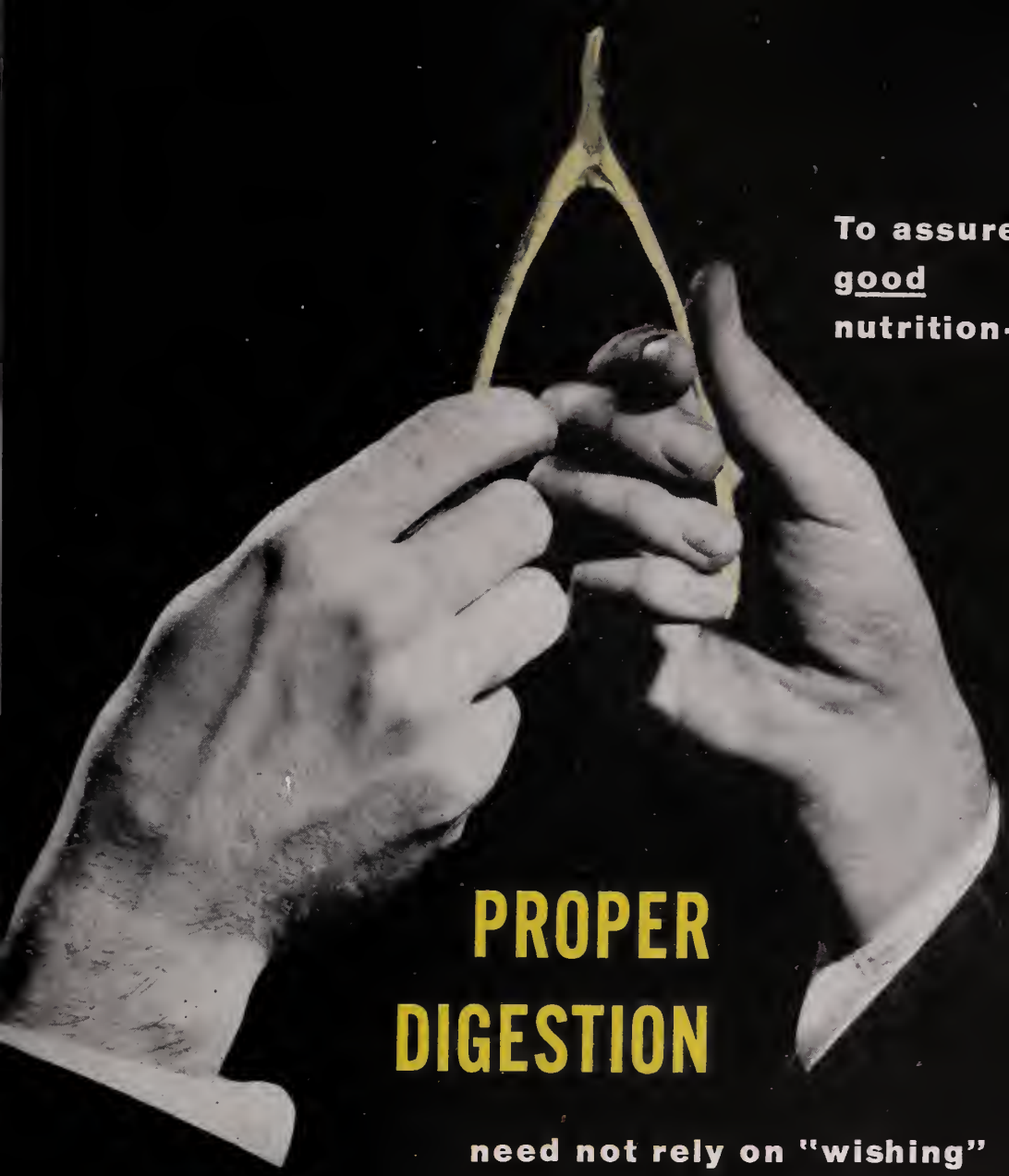
Dihydroxy aluminum aminoacetate, N.N.R.

In recent years, a number of new synthetic anticholinergic drugs with numerous and varying side effects have been investigated for treatment of peptic ulcer. However, a double-blind study conducted recently by Cayer et al suggests that the use of such anticholinergic drugs is seldom necessary. The authors concluded that "The percentage of 'good to excellent' results obtained in patients on continuous long-term antacid therapy with DAA (74%) is essentially the same as that previously noted in ulcer patients treated under similar conditions with potent anticholinergic drugs alone."

The authors' choice of dihydroxy aluminum aminoacetate (DAA) was based on the fact that "the tablet form of DAA (is) more active than a variety of straight aluminum hydroxide magmas." They further commented that "Because of the convenience of tablet medication as compared with the liquid gel—a convenience which in the use of other tablets is gained at the expense of therapeutic effectiveness—dihydroxy aluminum aminoacetate was used exclusively."

ALGLYN (dihydroxy aluminum aminoacetate) Tablets are supplied in bottles of 100 tablets (0.5 Gm. per tablet).

BRAYTEN PHARMACEUTICAL COMPANY • *Chattanooga 9, Tennessee*



To assure good nutrition—

PROPER DIGESTION

need not rely on "wishing"

Each double-layered Entozyme tablet contains:

Pepsin, N.F. ..... 250 mg.
—released in the stomach from gastric-soluble outer coating of tablet.

Pancreatin, U.S.P. ..... 300 mg.

Bile Salts ..... 150 mg.
—released in the small intestine from enteric-coated inner core.

A. H. ROBINS CO., INC.
Richmond 20, Virginia
Ethical Pharmaceuticals of Merit since 1878

As a comprehensive supplement to deficient natural secretion of digestive enzymes, particularly in older patients, ENTOZYME effectively improves nutrition by bridging the gap between adequate ingestion and proper digestion. Among patients of all ages, it has proved helpful in chronic cholecystitis, post-cholecystectomy syndrome, subtotal gastrectomy, pancreatitis, dyspepsia, food intolerance, flatulence, nausea and chronic nutritional disturbances.

For comprehensive digestive enzyme replacement—

ENTOZYME®

Robins

for "This Wormy World"



Pleasant tasting

'ANTEPAR'® brand

PIPERAZINE

SYRUP · TABLETS · WAFERS

Eliminate **PINWORMS IN ONE WEEK**
ROUNDWORMS IN ONE OR TWO DAYS

PALATABLE • DEPENDABLE • ECONOMICAL

'ANTEPAR' SYRUP – Piperazine Citrate, 100 mg. per cc.
'ANTEPAR' TABLETS – Piperazine Citrate, 250 or 500 mg., scored
NEW **'ANTEPAR' WAFERS** – Piperazine Phosphate, 500 mg.

Literature available on request

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N. Y.

when are tranquilizers indicated in pediatrics ?

Some doctors have questioned the use of tranquilizers in children. They feel, and rightly so, that these drugs should not be used as palliatives to mask distressing symptoms, while etiological factors go uncorrected. But there are three situations in which even the most conservative physician would not hesitate to use tranquilizers:

1. When the usually well-adjusted child needs a buffer against temporary emotional stress, such as hospitalization.
2. When a child needs relief from an anxiety-reaction that is in turn anxiety-provoking, so as to pave the way for basic therapy.
3. When anxiety underlies or complicates somatic disease, as in asthma.

In such situations, tranquilizers are likely to be more effective and better tolerated than previously accepted therapy, such as barbiturates.

But the question arises: **which** tranquilizer is suitable for children?

Most of the physicians now using tranquilizers in pediatric practice have found the answer to be ATARAX, confirming the conclusions of repeated clinical studies.

ATARAX is effective in a wide range of pediatric indications.
ATARAX has produced a "striking response" in a wide range of hyperemotive states.* In a study of 126 children, "the calming effect of hydroxyzine (ATARAX) was remarkable" in 90%.* Among the conditions that are improved with ATARAX are tics, nervous vomiting, stuttering, temper tantrums, disciplinary problems, crying spasms, nightmares, incontinence, hyperkinesia, etc.*

ATARAX is well tolerated even by children.
"ATARAX appears to be the safest of the mild tranquilizers. Troublesome side effects have not been reported. . . ."*

ATARAX offers two pediatric dosage forms.
ATARAX Syrup is especially designed for acceptability by medicine-shy youngsters. A small 10 mg. tablet is also available. In either case, you will get a rapid, uncomplicated response. Why not, for the next four weeks, prescribe ATARAX for your hyperemotive pediatric patients. See whether you, too, don't find it eminently suitable.

*Documentation on request

PEACE OF MIND ATARAX®
(BRAND OF HYDROXYZINE)

ATARAX
in any hyperemotive state

for childhood behavior disorders
10 mg. tablets—3-6 years, one tablet t.i.d.; over 6 years, two tablets t.i.d. Syrup—3-6 years, one tsp. t.i.d.; over 6 years, two tsp. t.i.d.

for adult tension and anxiety
25 mg. tablets—one tablet q.i.d. Syrup—one tbsp. q.i.d.

for severe emotional disturbances
100 mg. tablets—one tablet t.i.d.

for adult psychiatric and emotional emergencies
Parenteral Solution—25-50 mg. (1-2 cc.) intramuscularly, 3-4 times daily, at 4-hour intervals. Dosage for children under 12 not established.

Supplied: Tablets, bottles of 100. Syrup, pint bottles. Parenteral Solution, 10 cc. multiple-dose vials.

M. A. Sidell M.D.
Medical Director

Roerig Rx
New York 17, New York
Division, Chas. Pfizer & Co., Inc.

One of a Series of Newspaper Ads Directed to Your Patients and Our Customers....

She knows someone gramps never knew ...a grandfather

This little lady is enjoying life with grandfather . . . a pleasure many young people share today . . . but one which he probably didn't have when *he* was *her* age.



PEOPLES SERVICE DRUG STORES INC

Thanks to modern medicine, older folks have more years to look forward to. (Life expectancy has been increased by 20 years in the last 40.) Those extra years are healthier because modern geriatric medicine and physician's care has made them so.

As with all prescriptions at Peoples, your physician's geriatric prescriptions are dispensed accurately, quickly. And, of course, your prescription is priced with uniform economy.



Bring Your Next Prescription to Peoples

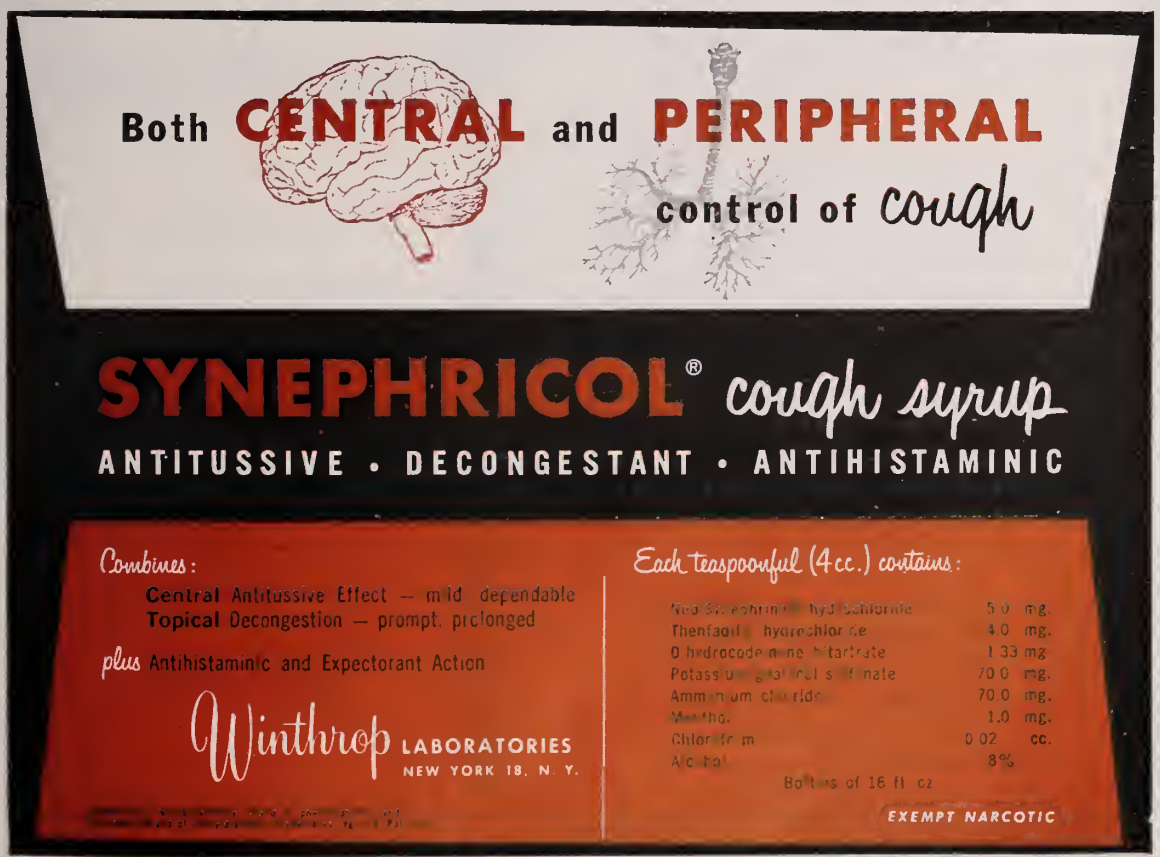
PEOPLES *Certified* PRESCRIPTIONS

AT ALL PEOPLES SERVICE DRUG STORES



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2. Bleiberg, J.: J. M. Soc. New Jersey *53*:37, 1956.
3. Abrams, B. P., and Shaw, C.: Clin. Med. *3*:839, 1956.
4. Welsh, A. L., and Ede, M.: Ohio State M. J. *50*:837, 1954.
5. Bleiberg, J.: Am. Practitioner *8*:1404, 1957.

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2. Thompson, L., Procter R., *North Carolina M. J.*, 15:596, 1954
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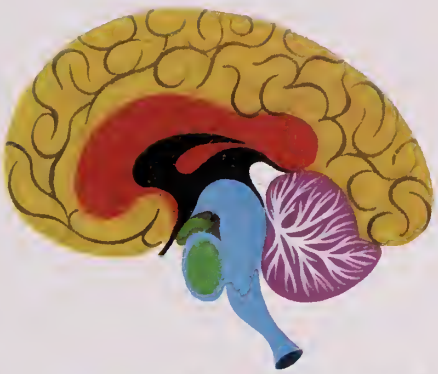
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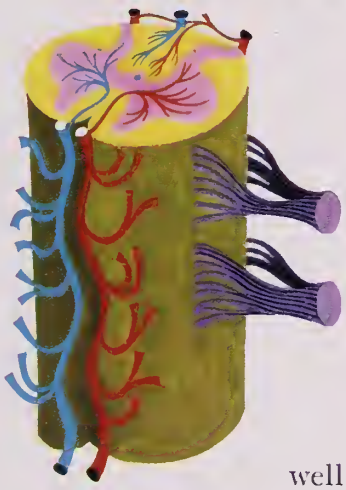
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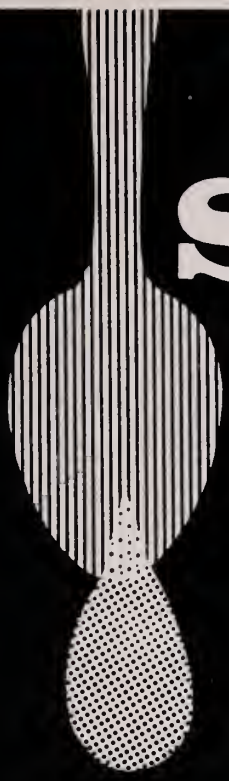


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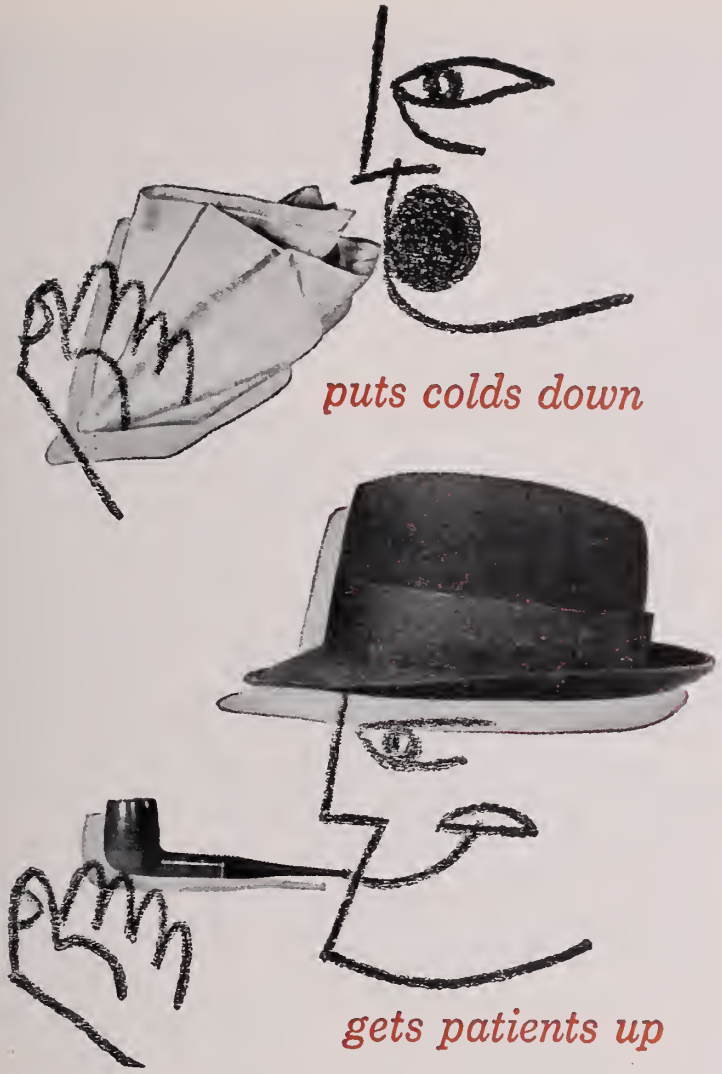
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The Virginia
MEDICAL
MONTHLY

February, 1958
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Guest Editorial . . . .

Psychoanalysis

THE FREUDIAN centenary in 1956 has been the occasion for both vigorous renewal of the claim that psychoanalysis is scientific, and pointed criticism of that claim. Such criticism directs attention again to the doctrinal disunity is psychiatry that is a persisting issue, and a substantial reason for some skepticism about the specialty as it faces the evergrowing incidence of mental disorder in the community.

The average physician's background of basic science should enable him to see the nature of the issue which psychoanalysis has introduced into medicine, and has thereby revived the question as to the sense in which psychiatry is a medical discipline. Freud's doctrine has permeated American psychiatry extensively. The issue, as it presents itself, ultimately requires a decision as to the nature of the genetic process that accounts for the development of the living being to maturity. That process confronts every physician when he deals with conditions of faulty development, and when, as is almost always true, his therapy assumes in any case that the patient's tissues possess regenerative power.

Although it does not receive much attention in medical school, the phenomenon of regeneration is recognized as an essential element in almost all therapy. However, regeneration is still a biological mystery. The modus operandi of the process can be described to some extent, but how it is governed systematically is unknown. But this is true also of the genetic process, i.e., ontogenesis, as a whole, of which regeneration is a persistently remaining manifestation. It is the pivotal problem of biology.

Surprisingly enough, psychoanalysis, which concedes that mental functions are expressions of corresponding material somatic and cerebral changes, claims that it has the formula for the genetic process as it is manifested in the psychic sphere. Here we have a prime paradox, since the true formula must of necessity be the same in essence for both the physical and the mental phases of life.

In the exposition of their genetic formula the Freudians present us with a system of psychic functioning in terms of which, they claim, so-called functional nervous and mental disorders can be understood. They speak of the mechanisms and dynamics of such functioning. They find that the operations of the system are manifested in the form of a play, backward and forward, along the ontogenetic path of development, of the activating and energizing principle of the patient's sexual nature.

Symptoms are then seen as disguised expressions of faults in the integration of his sexual nature which are commonly known as perversions.

The sexual functioning of a person, as well as any regenerative activity his tissues may present, is a mode of the manifestation of the genetic process. The Freudian formula for that process, incredible as it is, declares that the process as it is evident in nervous and psychic functioning, is reversible. Hence, what in psychoanalysis is called "regression" is a "mechanism" that serves as the main feature of the formula.

Theoretically, if regression could occur in the naturally developed physical body of a patient, we would expect to see it undergoing retrograde changes in which it entered into more and more immature stages of the course of development it had originally traversed. Its organs and tissues would undergo diminution and dedifferentiation; the patient would be restored to youth, infancy, and even intrauterine status. Of course the whole thing is a fanciful impossibility.

Nevertheless, psychoanalysis declares that in the patient's mental constitution and sexual nature such regression does occur. It adheres to this interpretation in spite of the fact that no correlated genuinely regressive changes are demonstrable in the patient's organs or tissues, or body as a whole, structually or functionally. What seems to be evident here is that the Freudians have been mistaking decomposition, which is what analysis is in any case, for reversed operation of the genetic process.

The physician generally sees some degree of a breaking-down process in tissue in disease, but he does not interpret it as a manifestation of a specific reversal of the genetic changes that had brought the tissue originally to maturity. He sometimes sees that the consequent healing regenerative process fails to a degree to return the damaged tissue to its fully mature condition, but that is recognized as an abortive halt in the restorative changes, and not a "fixation", as the Freudians would say, at a level to which the genetic process had regressed. It would be hard to find a typical physician who would assert that in dissecting a cadaver, examining its tissues histologically, and analyzing the body substances chemically, he was tracing backwards the developmental course that the live growing body had originally followed. However, psychoanalysis says that when it does comparable things in the psychic sphere such a retracing does occur, and a subsequent genetic recomposition in that sphere can be achieved.

There is nothing in any other branch of medicine comparable to the ambiguity of the Freudian doctrine. A final confusing feature of it is the "death instinct" that is said to be a normal component of one's psychic nature, urging one to seek self-destruction and a return to the primordial inorganic state. When manifested, this tendency, in contrast to what allegedly occurs commonly in the patient's sexual life, is said to take the direction, not of reversed ontogenesis, but of self-inflicted moral and physical damage which, as a mode of decomposition, is a much more direct way of reaching extinction.

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New York, New York

Intracranial Complications of Otogenous Origin

G. S. FITZ-HUGH, M.D.
A. T. CHIONG, M.D.
Charlottesville, Virginia

IN 1957, we[1] published in this journal a survey of temporal bone surgery, excluding that for stapes mobilization, performed at the University of Virginia Hospital during a ten-year period from 1946 to 1956. Five hundred and four procedures were carried out upon 449 patients; 373 of these operations in 322 patients were performed on the ear and mastoid cavities to control infection, 37 for acute otitis media and mastoiditis, and the remainder for chronic suppurative disease.

The present brief presentation is a part of the original survey and deals with the intracranial complications of otogenous origin disclosed in the survey. These are listed in Table I.

TABLE I
COMPLICATIONS OF OTOGENOUS ORIGIN

Type	Number
Meningitis	9
Brain Abscess	4
Lateral Sinus Thrombosis	2
Petrositis	1
Total	16

Two cases of labyrinthitis were not included under intracranial complication.

MENINGITIS

As one would anticipate, meningitis was the most common complication encountered. This was also true in the preantibiotic era, and still is with the use of antibiotics, although the actual incidence has been remarkably reduced, as indicated by Courville's[2], Nielsen's[3], and Hara's[4] studies.

During the ten-year period, the Record Department of the University of Virginia Hospital had listed a total of 280 cases of meningitis of bacterial and viral origin. From a study of these records, we are reasonably certain that the meningitis in 9 of these patients was of otogenous origin, seemingly a low percentage rate of 3.1. There may well have been more, as one of the disadvantages of antibiotic therapy is its masking effect, particularly in clinical otology and also especially in younger children. Six of our patients were children, the oldest, 11 years of age, and the youngest, 2 months. French[5], in his study, reported the greatest number of cases of meningitis occurring in children under one year of age.

There was one death in the group, and that in an adult. The death rate from meningitis of aural origin in this ten-year period, according to the survey, was exceedingly low, approximately .03 per cent. All 9 of the patients had either simple (cortical) mastoidectomies or the more extensive tympanomastoid surgery.

BRAIN ABSCESS

The next most frequent intracranial complication was that of brain abscess. There were 4 cases, 2 adults and 2 ten year old children. The ear infections were chronic in nature in three of the patients and acute in the fourth, an adult, who died as the result of the disease. There was also a second death in this group, in the case of a child. Two of the abscesses were located in the adjacent temporal lobe and two were in the cerebellum on the same side. All of these patients had aural surgery and, in addition, drainage of the abscesses by the neurosurgeons.

The total number of cases of brain abscess recorded during this ten-year period was 24. Approximately 16 per cent were otogenous in origin.

LATERAL SINUS THROMBOSIS

There were 2 cases of lateral sinus thrombosis: one, a child whose ear disease was classified as chronic, and the other an adult whose disease was designated as being acute. Both patients recovered promptly following mastoid surgery and proper antibacterial therapy. Theoretically, this type of complication will become exceedingly rare in the future, due to the reduction in the occurrence of mastoiditis as a complication of otitis media.

PETROSITIS

One patient was operated upon, with the typical symptoms and signs of a petrositis complicating chronic ear disease. An abscess was drained in the region of the petrous apex. Recovery was slow but complete.

From the Department of Otolaryngology, University of Virginia Hospital, Charlottesville, Virginia.
G. S. FITZ-HUGH, M.D., *Otolaryngologist-in-Chief*, A. T. CHIONG, M.D., *Resident in Otolaryngology*.

ADDITIONAL INFORMATION

Tables II, III, IV and V give additional information, mainly in regard to the organisms which were and were not cultured from the various sites in the cases mentioned. These are listed as obtained from the records. Various inconsistencies are evident and suggest the need for improvement along these lines. This should invariably include the collection of material for bacterial study, whenever available, and secondly, the processing of this material by the correct methods. To accomplish this will require full cooperation by the physicians, nurses, and laboratory personnel. It is particularly important in this era of selective antibacterial therapy.

Incidentally, in the original ten-year study[1], exudate was obtained for cultures in 229 cases with ear disease. The material was taken from the ear canals. The most frequent organisms reported were as follows:

Organisms	*Times Reported*
B. pyocyaneus	87
B. proteus	67
Staph. aureus hemo.	43
Staph. albus hemo.	26
Staph. albus non-hemo.	23

COMMENTS

It is our impression that in the present antibacterial era of drug therapy, the number of cases of suppurative otitis media, considered typical in the past, has decreased, but that there has been an increase in nonsuppurative, secretory, or aseptic, (however you may wish to designate it), middle ear disease, particularly in children. Also, we believe that this more recent type of pathological condition is difficult to treat satisfactorily for various reasons, such as nonrecognition of its presence, lack of morbidity of a septic nature, and failure to realize the possible undesirable sequelae—defective hearing, disposition to recurrent ear infection, and the complications therefrom—to mention some. Undoubtedly this situation is due, mainly, to the development and use of the various antibacterial drugs, one of the few

TABLE No. II

MENINGITIS-CULTURES

Case	Age	Ear Canal	Tympanomastoid Cavity	Blood	Spinal Survey	Additional Information
1	2 mos.	B. pyocyaneus B. aerogenes	No growth	No growth	Pneumococci type III	Recovered
2	1 yr.	H. influenzae type b	No growth	No growth	H. influenzae type b	Recovered
3	8 yrs.	Str. Beta-hemo. Staph. albus non-hemo. H. influenzae	Str. Beta-hemo. B. subtilis	No growth	No growth	Recovered
4	8 yrs.	Str. Beta-hemo. Staph. aureus hemo.	Not obtained	No growth	Str. Beta-hemo.	Recovered
5	11 yrs.	B. proteus C. xerose	Not obtained	No growth	No growth	Recovered
6	11 yrs.	Staph. albus non-hemo. C. hofmanni	Not obtained	Not obtained	No growth	Recovered
7	36 yrs.	Staph. albus hemo. B. proteus	No growth	No growth	No growth	Expired
8	38 yrs.	Staph. aureus hemo.	No growth	No growth	Pneumococci type VIII	Recovered
9	67 yrs.	Staph. albus non-hemo. Staph. aureus hemo.	Staph. albus hemo. Staph. aureus hemo. Pneumococci	Pneumococci type III	Pneumococci type III	Recovered

disadvantages resulting from this therapy. There are other factors, though, to be considered, such as the inappropriate and inadequate use of these drugs, failure on some occasions to recognize the need for surgical drainage of the middle ear, an existing allergic situation, disease and obstruction in the nasopharynx extending to the eustachian tube, etc.

The aseptic ear disease mentioned is less dangerous as far as vital structures are concerned. However, as we have indicated, the more dangerous ear infections and their complications, though having undergone an amazing decrease in incidence, still exist even in this antibiotic age. This is the lesson to be gained: one must be aware of the possibility of these infections, and should realize that, because of the masking effects of the drugs, the pictures of ear diseases and their complications have altered and are now more difficult to recognize and diagnose. The older pattern of otitis media, mastoiditis, meningitis, and brain abscess, developing in a logical sequence relative to the pathology, is now rarely seen.

To further decrease the incidence of complications

TABLE No. III

Brain Abscess–Cultures

Case	Age	Ear Canal	Tympanomastoid Cavity	Blood	Spinal Fluid	Abscess	Additional Information
1	10 yrs.	B. pyocyaneus Staph. aureus non-hemo.	B. pyocyaneus	Not obtained	Not obtained	Str. non-hemo.	Expired Right cerebellar abscess Chronic ear, rt., infection
2	10 yrs.	No growth	No growth	Not obtained	Staph. aureus non-hemo.	Str. Beta-hemo.	Recovered Left temporal lobe abscess Chronic ear, left, infection
3	24 yrs.	B. proteus Staph. albus non-hemo.	B. proteus Staph. albus non-hemo.	No growth	No growth	B. proteus	Expired Left, cerebellar abscess Acute ear, left, infection
4	48 yrs.	No growth	No growth	Not obtained	No growth	No growth	Recovered Left temporal lobe abscess Chronic ear, left, infection

TABLE No. IV

Lateral Sinus Thrombosis–Cultures

Case	Age	Ear Canal	Tympanomastoid Cavity	Blood	Spinal Fluid	Abscess	Additional Information
1	10 yrs.	B. proteus C. hofmanni	B. aerogenes	No growth	No growth	Not obtained (Thrombus)	Survived
2	16 yrs.	B. proteus	B. proteus B. aerogenes	No growth	Not obtained	Not obtained (Thrombus)	Survived

TABLE No. V

Petrositis–Culture

Case	Age	Ear Canal	Tympanomastoid Cavity	Blood	Spinal Fluid	Abscess	Additional Information
1	41 yrs.	Not obtained	Not obtained	Not obtained	Not obtained	B. subtilis	Survived

of ear disease, in the case of a patient under treatment for this condition, all physicians concerned (including the otolaryngologist) should be on the alert for such indications as persistently diminished hearing acuity, continued pain, listlessness, irritability, signs of meningeal irritation, and cranial nerve palsies. The older picture of developing sepsis and impending complications, manifested by a fairly abrupt, unfavorable change in the patient's condition, is seen much less often. When these symptoms and signs become apparent, then the patient should have the benefit of consultation with an otologist, who in turn may need the aid of a neurosurgeon. Another and better approach to the handling of these ear diseases is more careful supervision of the patient under antibiotic therapy, with less reliance placed upon the drug per se. Again, nothing is more effective in the treatment of otitis media, the prevention of recurrences and complications, than the appropriate and adequate use of the antibacterial drugs plus surgical drainage (myringotomy) of the middle ear cavity. This does not necessarily mean that all patients with otitis media must have a myringotomy or, for that matter, even an antibiotic drug. We believe that the pendulum of thought supporting "drugs sans drainage" has exceeded its limits of safety, and that surgical drainage should be and is being utilized now to accomplish better results. Rosenwasser[6] and Goodale[7] and their associates support us in these impressions.

Certain principles have remained unchanged, even after extensive use of the numerous antibiotic drugs. Meningitis is the commonest intracranial complication of middle ear disease and may result from an acute process or an acute exacerbation of a chronic one, the former in children and the latter in adults. Treatment of this complication requires extensive antibacterial therapy and usually, in addition, aural surgery. Brain abscess is more frequently a complication of chronic ear disease and, to be treated effectively, requires the administration of antibiotic drugs plus aural and cranial surgery. All chronic middle ear infections in adults and children are believed to be potential sources for brain abscess and should be evaluated with this as the important consideration. While the incidence of surgical mastoiditis has decreased markedly, this disease still exists. The complications of lateral sinus thrombosis and abscess are extremely rare, though the number of cases in our survey was higher than one now usually expects.

SUMMARY

Observations are made in a survey of the intracranial complications secondary to ear and mastoid disease. The incidence of only 16 such cases in a group of 322 patients is indicative of the comparative rarity of these complications during the present era of the many antibacterial drugs. However, they still occur and one must be on the alert for this development. Meningitis is the most common complication.

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104 East Market Street
Charlottesville, Virginia

584 Foreign Bodies Removed from the Esophagus

A Statistical Study

EDWARD S. RAY, M.D.
PORTER P. VINSON, M.D.
Richmond, Virginia

FOREIGN BODIES are frequently encountered in the air and food passages and yet individual reports of safety pins removed from the esophagus, or peanuts from the bronchi, continue to interest the public as well as physicians.

Hardly a month passes without a report from the Associated Press featuring the removal of a foreign body from some youngster, along with a photograph of the patient, the foreign body and frequently the mysterious instruments employed in the operation. Reports in medical journals are of course less dramatic, but seldom provide much useful information for those who are interested in this group of patients. Usually more attention is directed to the varicus types of foreign bodies that are ingested or aspirated than to methods of diagnosis and proper management.

This report will be restricted to foreign bodies that we have removed from the esophagus during the past twenty years.

In this period of time we have seen and directed treatment in 933 patients who have had foreign bodies in the air and food passages. In addition we have been informally consulted concerning many others who have had foreign bodies in the stomach or intestines in whom we have advised observation only.

Two hundred seventeen of these patients had foreign bodies in the respiratory tract, 106 were in the stomach, 17 in the hypo-pharynx and 9 in the intestine. In the remaining 584 patients the foreign body was in the esophagus.

Contrary to general belief foreign bodies are found in the esophagus more frequently in adults than in children. In our patients 269 were under 10 years of age while 315 were 10 years of age or older. The youngest patient was 2 months old and the oldest was 94 years.

The absence of teeth is a major factor in the impaction of a foreign body in the esophagus. In adults inadequate mastication and the loss of sensation in the mouth that results from artificial dentures is responsible for bones and meat that stick in the esophagus. Dentists should warn all patients, when they are provided with partial or complete dentures, of this hazard and should explain that care should be taken in the preparation and mastication of food. This applies particularly to chops, chicken, hash and especially to chicken served a la king, in salad, and in pie. We would also take issue with dentists who recommend that removable dentures, complete or partial, be left in a patient's mouth during sleep. In several of our patients dentures have been swallowed while they were asleep and have become impacted in the esophagus necessitating esophagoscopic removal.

Three hundred and two of the patients were females and 282 were males. The majority of the foreign bodies were found in the upper third of the organ, usually just within the esophageal orifice. Four hundred and five were in this location. One hundred fourteen were in the lower third, 44 in the middle third and in 21 our records failed to state the point of lodgment.

Associated obstructive lesions in the esophagus were apparently responsible for impaction of the foreign body in 90 patients. Thirty-seven had benign strictures from various causes and 37 had a short or sliding type of hiatal diaphragmatic hernia with or without scarring at the site of the hernia. Congenital stricture was present in 8 patients and carcinoma and cardiospasm in 3 each. In another patient, "spasm at the cardia" was thought to be responsible for the obstruction and in one paraesophageal hiatal hernia was identified.

As the majority of associated lesions are located in the lower third of the esophagus, patients having foreign bodies in this location should be carefully questioned in reference to previous dysphagia. After the foreign body has been removed, those having a history of previous difficulty in swallowing should have careful investigation of the esophagus.

There were many varieties of foreign bodies, but the greatest number—283—were bones and meat. Interestingly fish bones were infrequently observed

From The Medical College of Virginia.

except in the tonsils, base of the tongue and in the hypo-pharynx. Next in frequency were coins and disc-shaped foreign bodies—157 in number. There were 38 open safety pins and the balance—106—consisted of a great variety of substances.

As with most other conditions, the presence of a foreign body in the esophagus can usually be determined by a carefully elicited history. Unfortunately difficulty in swallowing is frequently considered emotional in origin and patients who think they have swallowed a foreign body are told that their symptoms are nervous in origin unless the substance is metallic and is revealed on roentgenoscopic examination. When fish bones are swallowed the throat may be scratched and anxiety intensifies the sensation of a foreign body in the tonsillar area. If a bone is not found on careful inspection of the tonsils, base of the tongue, and the hypo-pharynx, direct inspection of the esophagus should be deferred for at least a day. However, a patient with dental plates who has been eating chicken or chops and has a sensation of a foreign body in the suprasternal notch associated with pain on swallowing should be esophagoscoped without unnecessary delay. Patients who have swallowed a bolus of meat and thereafter are unable to swallow water obviously have complete obstruction of the esophagus and should be treated appropriately. Roentgenoscopy is valuable in determining the presence and type of metallic foreign bodies, but in many others such as meat, bones, and plastic toys, direct roentgen examination may not reveal any abnormality.

When a bone is suspected in the upper portion of the esophagus, a film made in the anterio-posterior position is worthless whereas a lateral exposure of the cervical area may reveal the foreign body. In any case a patient who continues to have discomfort in this area on swallowing after the probable ingestion of a bone should have esophagoscopy.

Frequently roentgenologists are tempted to have a patient suspected of having a foreign body in the esophagus swallow a mixture of barium or a piece of cotton impregnated with barium. This should not be done unless the evidence for foreign body is negligible. If a foreign body is present a coating of barium increases the difficulty of esophagoscopic visualization and removal.

Foreign bodies that have passed through the esophagus into the stomach or intestines usually pass on through the intestinal tract and out the rectum without difficulty. The stomach was opened for removal of 3 of 106 foreign bodies that were found there. Two of these were open safety pins and both would probably have passed spontaneously if the families had not become unduly alarmed about prolonged delay. The third was a bobby pin that remained in the duodenum for three weeks before surgical removal. One of our patients passed a large metal nut from a bolt thirty-six days after ingestion. It had remained in the stomach until the day before expulsion.

We were informally consulted about many other foreign bodies in the stomach that passed through the bowel unaided. We recommend a normal diet for these patients and not the bulky diet of mashed potatoes and bananas that is frequently suggested. Laxatives should be avoided.

We have not had any experience with removal of metallic foreign bodies from the stomach with magnets.

Esophagoscopy is necessary for the removal of the majority of foreign bodies from the esophagus. In 24 patients having obstruction from a bolus of meat, papain digestant has been employed with satisfactory results. We are not certain that this method of removal should be routinely employed because a bone is frequently incorporated in the meat. Thus far we have not had any untoward complications, but unless obstruction is relieved promptly esophagoscopy should not be deferred.

In the earlier years of our experience, esophagoscopy was done on most of the children whom we examined without anesthesia and in adults we employed a local anesthetic agent. At present almost all of our patients are examined under general anesthesia. For short procedures in children, such as for the removal of a coin, ordinary inhalation of ether is satisfactory. When a longer operative period is anticipated, such as for the removal of an open safety pin, a tube is inserted into the trachea to facilitate respiratory function. In adults intravenous anesthesia is employed with the insertion of an intratracheal tube for administration of oxygen. All patients having opaque foreign bodies should have fluoroscopy just before being brought to the operative room for esophagoscopy. Not infrequently a foreign body that has been present in the esophagus for several days will pass into the stomach spontaneously during the night, before examination. By routinely examining patients in this way unnecessary esophagoscopy can be avoided.

Frequently foreign bodies will pass into the stomach during anesthesia or during esophagoscopic examination. When the foreign body is metallic,

fluoroscopy should be done immediately after esophagoscopy is completed to be certain that it is in the stomach. On several occasions vomiting has occurred after esophagoscopy with regurgitation of the foreign body into the esophagus necessitating further instrumentation.

Esophagoscopy for removal of a foreign body is usually not an emergency procedure and should be deferred until competent assistance is available.

A word of caution should be given in regard to dilating strictures after removal of a foreign body, such as a piece of meat, that has been impacted in the lumen of the stricture for as long as a day. Time should be allowed for healing of any ulceration before dilation is performed.

A patient, not included in this series, who had had a stricture of the esophagus from swallowing a solution of lye in infancy developed complete esophageal obstruction at eighteen years of age while eating lunch. The following morning she attempted to force the bolus of meat that was obstructing the stricture into her stomach by drinking a glass of water. This effort was followed by severe substernal pain, pneumothorax on the left side and evidence of shock. Death occurred twenty-four hours later and postmortem examination revealed rupture of the esophagus at the site of stricture and associated mediastinitis. Pressure from the foreign body apparently had caused necrosis of scar tissue at the site of the burn and forced deglutition induced rupture.

Three of our patients who had cicatricial stricture associated with foreign body had rupture of the scar when dilations were done two or three days after the foreign body had been removed. Two of these apparently had very little leakage and both recovered following the use of antibiotics. In the third patient surgical repair of the rupture was followed by recovery. At present we advise postponement of dilation of a stricture for at least a month after removal of a foreign body.

Spontaneous perforation of the upper portion of the esophagus occurred in one of our patients, a child 2 years of age, from a quarter that had been present for a week. The coin had perforated the wall of the esophagus and was removed surgically with recovery and without the formation of stricture.

Another patient with marked ulceration of the upper esophagus in association with a bone developed perforation from instrumentation, but recovered following operative repair of the laceration.

There was one death in our series and this is of sufficient interest to justify a full report:

A white man 66 years of age was examined on November 28, 1955. He was edentulous and had been well until five days previously when he had swallowed a chicken bone. This was immediately followed by severe mid substernal pain which was intensified by coughing and swallowing. Because of painful deglutition he had taken very little by mouth since his accident. His temperature had been elevated to 101° and there was evidence of pneumonia in the lower lobes of both lungs. Roentgenoscopic examination of the chest revealed marked widening of the mediastinal area—especially on the right side. The leucocyte count numbered 27,000. He had been given a mixture of barium by mouth prior to arrival here and nothing abnormal was noted.

Although his history definitely indicated the presence of a foreign body in the esophagus the physician to whom he was referred suspected that he had a dissecting aneurysm of the thoracic portion of the aorta.

Esophagoscopy was done the day after his arrival, under intravenous anesthesia, and an obstructing mass was encountered just below the entrance to the esophagus.

There was a small amount of blood in the esophagus, but no evidence of foreign body. The exact nature of the mass could not be determined, but the opinion was expressed that there might have been a pre-existing lesion in the esophagus prior to the time the bone was swallowed although the patient had not noted previous symptoms.

The following day the patient thought that he had less pain on swallowing and when roentgenoscopic examination was made of the esophagus using iodized oil as a contrast medium nothing abnormal was noted. He continued to improve until the morning of December 3, 1955, when he became short of breath and suddenly expired. Post mortem examination revealed a large mass in the upper mediastinal area that completely surrounded the esophagus and produced marked obstruction of the organ. This proved to be a large organized blood clot. Seven centimeters below the mass was a spicule of bone 3.5 cms in length that had perforated both sides of the esophagus and extended into the aorta. Bleeding from the aorta had dissected along the outside of the esophagus and had produced the organized hematoma, which in turn had obstructed the upper portion of the esophagus. There was a small amount of blood-stained secretion in the esophagus.

SUMMARY

1. Foreign bodies are frequently encountered in the esophagus—particularly in the upper third of the organ.

2. Painful deglutition and obstruction to passage of food through the esophagus are the most frequent symptoms.

3. The majority of foreign bodies are not revealed by roentgenoscopy and diagnosis must be made from history and esophagoscopy.

4. Foreign bodies are more frequently seen in adults than in children.

5. When a foreign body that is non-opaque to x-ray is suspected in the esophagus, barium should not be used as a contrast medium in localization. Iodized oil may be employed if desirable.

6. Esophagoscopic examination should be made without prolonged delay if a foreign body is suspected in the esophagus.

7. General anesthesia increases the comfort and safety of instrumentation.

8. Absence of teeth and artificial dentures are responsible for lodgment of meat and bones in the esophagus because of impaired sensation and inadequate mastication.

9. Pre-existing lesions in the esophagus are frequently responsible for lodgment of a foreign body, especially in the lower third of the organ. Whenever a foreign body is encountered in this location complete investigation of the esophagus should be made after removal.

10. Impaction of a foreign body in the esophagus, especially a bolus of meat at the site of a previously existing stricture, may further compromise an already reduced blood supply and may result in necrosis and rupture of the wall of the esophagus. Dilation of a stricture should be deferred for at least a month after removal of a foreign body to permit healing of ulceration and re-establishment of circulation.

11. A foreign body that passes through the esophagus will usually continue through the gastrointestinal tract and be expelled spontaneously. Occasionally passage through the stomach is delayed, but surgical removal is seldom necessary.

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DIAGNOSIS OF POISONING

Arsenic, Mercury

The Reinsch test is a rapid and sensitive presumptive test for the presence of arsenic or mercury by virtue of their deposition on copper.

20 ml. of urine, vomitus, food, etc. is measured into a small Erlenmeyer flask. 4 ml. of concentrated hydrochloric acid and a small copper spiral is added. (20 gauge copper wire wound around a micro spatula or thin wood applicator, removed and cut into about a ¼ inch length; if this is not available a small piece of copper sheet or strip may be used. The copper must be shining clean to clearly show deposition, if any.) Heat gently for about one hour. If a mercury compound is present there will be a silvery deposition on the copper, sensitive to 0.050 mg. mercury. If an arsenic compound is present there will be a dull black deposit, which is sensitive to 0.010 mg. arsenic.

This test is rapid, sensitive but not specific since other metals such as bismuth (shiny black deposit) and antimony (dark purple sheen) may also deposit if present.

Esophageal Hiatus Hernia

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PRIOR to the past decade the pathogenesis of symptoms of hiatus hernia was not generally appreciated and little thought had been devoted to the physiology and anatomy of the esophago-gastric region. Ill-devised operations based on this background often failed to relieve symptoms and the hiatus hernia all too frequently reoccurred.

This report is based on a review of the records of 311 patients with hiatus hernia. Of this group 256 were admitted to the Medical College of Virginia during the past five years, 1952-1956, and the remaining patients were referred to the authors prior to or after this period of study.

Hiatus hernia may be defined as an intrathoracic protrusion of abdominal contents through the esophageal hiatus. The stomach or a portion of this organ is usually involved in the herniation and the anatomical relationship of the cardia to the esophageal diaphragmatic hiatus permits the hernias to be classified as either the sliding or parahiatal types (Fig. 1). Infrequently, the hernia shows a component of both the sliding and parahiatal varieties and such hernias may be classified as the mixed type. In the sliding hiatus hernia the cardia of the stomach lies above the esophageal hiatus while in the parahiatal variety the cardia lies below the muscular ring of the diaphragm. The sliding hiatus hernia either alone or in combination with a component of the parahiatal hernia accounts for 95 per cent of all herniations through the esophageal hiatus (Fig. 2). The sliding hernia has been erroneously classified as the short esophagus hernia, but the esophagus is not shortened, except in advanced chronic esophagitis, and the stomach can be readily returned to the abdomen. There is a rare developmental anomaly where the stomach fails to descend into the abdomen and the intrathoracic position of the viscus is mistaken for hiatus hernia. This condition known as congenital short esophagus is omitted from this discussion.

Hiatus hernia is a common disease and is found in many patients with upper gastrointestinal complaints. The Department of Roentgenology of the Medical College of Virginia found during upper gastrointestinal studies with barium in patients with upper gastrointestinal complaints that the incidence of hiatus hernia is second only to duodenal ulcer[4]. Two hundred and fifty-six of the 140,096 patients (or one out of 582 patients) admitted to the Medical College of Virginia Hospital during the past 5 years had a diagnosis of hiatus hernia.

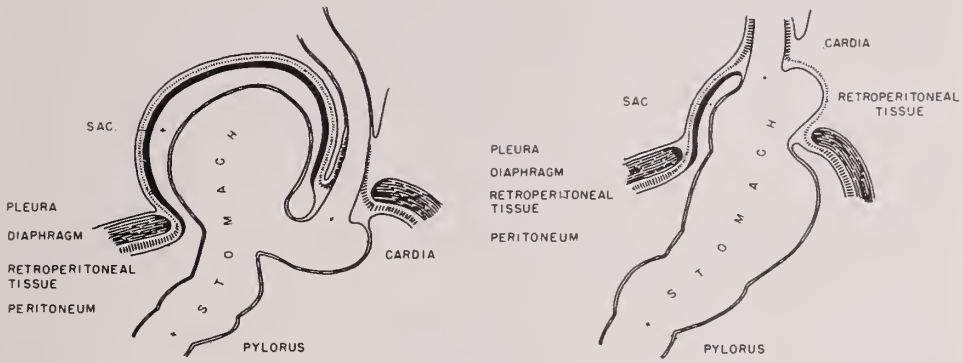


Fig. 1—Anatomical characteristics hiatus hernia.

The normal esophageal hiatus will admit one finger, but defective development is not an uncommon finding during abdominal operations. Harrington[3] found as an incidental observation when operat-

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ing for other abdominal pathology that the esophageal hiatus would admit two or more fingers in one out of 10 patients. This abnormality of the hiatus contributes to the subsequent development of hernia. Although hiatus hernias may occur in children, the majority of patients are between 40 and 70 years of age (Table 1). It would appear logical to accept the loss of tissue tone in the process of aging, congenital mal-development of the esophageal hiatus and increased intra-abdominal pressure as the factors most likely operating in the production of hiatus hernia. Increased intra-abdominal pressure is caused by obesity, pregnancy, trauma, prostatic hypertrophy,

TABLE 1

AGE DISTRIBUTION 311 PATIENTS HIATUS HERNIA

Age	Under 1	20-30	30-40	40-50	50-60	60-70	70-80	Over 80
Male	2	9	11	37	46	30	14	5
Female	2	8	17	33	44	29	22	2

tumors, or ascites. It is interesting to note that of the 8 female patients with hiatus hernia admitted to the Medical College between the ages of 20 and 30 years 7 were in the third trimester of pregnancy.

Hiatus hernia may alter the normal peristalsis of the esophagus and lead to regional esophagospasm which is manifested by mild dysphagia. The most severe symptoms and complications of hiatus hernia are a result of reflux esophagitis. The mucous membrane of the esophagus is, under normal conditions, extremely sensitive to the acid-pepsin chyme. The physiologic mechanism for closure of the cardia of the stomach has never been solved to the satisfaction of all interested in the esophagogastric region. Contraction of the longitudinal muscle fibers of the stomach which pass over the esophagogastric junction increases the angulation of the junction and prevents reflux of gastric contents according to Barrett[2] (Fig. 3). There is no true cardiac sphincter, but the anatomical sharp deviation of the esophagus anteriorly and to the left after it passes through the diaphragm, the oblique entry of the esophagus into the stomach, and contraction of the longitudinal muscle fibers of the stomach under normal conditions prevent reflux



Fig. 2—PA and lateral views of barium filled esophagus and stomach depicting sliding hiatus hernia

of gastric contents into the esophagus. In sliding hiatus hernia the cardia lies above the diaphragm and the normal effective mechanism for its closure is lost. In parahiatal hernia, the cardia lying below the diaphragm is competent. This type of hernia is not associated with reflux esophagitis, but the symptoms of dyspnea and palpitation of the heart are due to herniation of a large portion of the stomach into the thorax.

An incompetent cardia situated below the diaphragm may lead to reflux esophagitis in a patient

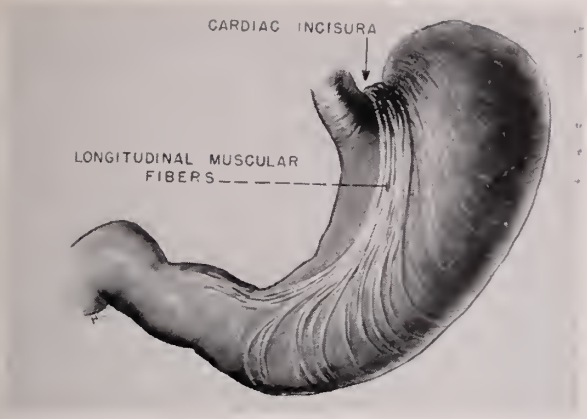


Fig. 3—Gastric mucosa stripped away exposing heavy bundle of longitudinal smooth muscle fibers of stomach.

without hiatus hernia. In such individuals the esophagus opens high on the stomach leaving little of the fundus above the level of the cardia (Fig. 4). It is important to differentiate this type of incompetent cardia from that associated with sliding hiatal hernias, for their operative correction is entirely different.

Uncomplicated sliding hiatus hernias are characterized by ill-defined upper gastrointestinal complaints which are exaggerated by the recumbent position and often relieved by assuming an upright

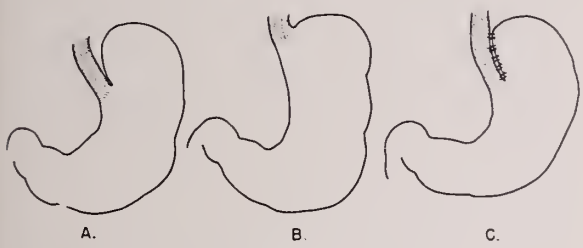


Fig. 4—a. Normal esophagogastric junction.
b. Abnormal take-off of esophagus (Occasionally cause of reflux esophagitis).
c. Method of correction of anomaly illustrated in b.

position or by the ingestion of alkalies. Post-prandial epigastric fullness, eructation of gas, and fleeting episodes of dysphagia are interrupted by transient sub-sternal or upper quadrant pain. Food and gastric chyme often return to the esophagus on bending over after meals, and it is necessary to re-swallow the previously ingested food. Many of these patients are referred to the psychiatrist for treatment of gastric neuroses only to be returned for further evaluation of the upper gastrointestinal tract. Sooner or later the terminal esophagus reacts to the acid chyme and esophagitis develops. The sub-sternal pain becomes intense, may radiate into both arms or even into the neck and palate, and is frequently described as boring or vice-like in character.

The development of this type of pain, associated with pallor and shock, in a patient without a previous history of hiatus hernia usually leads to an erroneous diagnosis of coronary occlusion. Four of the 59 patients subjected to surgical repair of the hiatus hernia by the authors were treated for months for coronary disease before establishment of a correct diagnosis. Nocturnal attacks of sub-sternal pain are common, but sleeping on the left side or in a sitting position lessens the frequency of attacks. Peptic ulceration in the herniated gastric pouch or ulceration of the terminal esophagus may be complicated by chronic or acute hemorrhage. Reflux esophagitis may terminate in a fibrous stricture of the esophagus and produce complete esophageal obstruction. Chronic anemia and acute upper gastrointestinal hemorrhage should suggest the possibility of hiatus hernia. Of 311 patients considered in this study 116 had developed either one or more serious complication (Table 2). Respiratory symptoms characterized

Table 2
Complication in 116 of 311 Patients with Hiatus Hernia*

Bleeding	Acute (Massive 9)**	41
	Chronic	31
Stricture	Spasm or early stricture	18
	Organic-Fibrous	11
Esophagitis	With Ulcer	14
	Without Ulcer	35
Foreign Body Obstruction		11
Premature Delivery***		1

*Multiple complications in some patients
**Shock or requiring 1500 c.c. blood for stabilization of circulation
***Severity and intractability of symptoms required induction of labor

by dyspnea and tightness in the chest are usually manifestations of large hernias of the parahiatal type of so-called "up-side-down stomach".

Careful analysis of upper gastrointestinal complaints will usually lead to a correct diagnosis of hiatus hernia. Confirmation of the clinical diagnosis can be attained by roentgenograms and esophagoscopy. Only 5 per cent of hiatus hernias can be recognized in the upright position during upper gastrointestinal studies with barium. In 1930 Ritvo[5] emphasized the importance of the Trendelenberg position which improved the diagnostic acumen of the roentgenologist; however, the head-down position during a barium meal will not demonstrate an existing hernia in one out of 5 patients. If the examination is repeated at a later date, it is possible to demonstrate the hernia in a few who were previously overlooked. We have repaired hiatus hernias in 3

patients without benefit of roentgenographic confirmation of the diagnosis and have relied solely upon the symptom complex and esophagoscopy. Esophagoscopy discloses loss of the normal deflection of the esophagus to the left and the instrument passes directly into the stomach. Upon its withdrawal from the stomach the gastric mucosa can be seen to follow the tip of the esophagoscope upwards to a level above the esophageal hiatus. Esophagoscopy permits accurate assessment of the complications of hiatus hernia and frequently discloses unsuspected esophagitis or ulceration.

Concomitant diseases should be considered in the preliminary studies and treated according to their surgical or medical indications. Of the 59 patients subjected to surgery by the authors, 4 had associated cholelithiasis, 9 duodenal ulcer, 2 previous gastric resection for duodenal ulcer, 4 coronary disease, and one had an aneurysm of the splenic artery. It should be emphasized that all too frequently the treatment of concomitant diseases such as cholelithiasis by cholecystectomy fails to relieve a patient with hiatus hernia of his symptom complex.

It seems odd that simple inguinal hernias always receive serious surgical consideration while symptomatic hiatus hernias, prone to the develcpment of catastrophic complications, are often relegated to methods of treatment other than direct surgical repair! Serious consideration should be given to the operative repair of all hiatus hernias; however, it seems reasonable to delay surgical treatment in the asymptomatic variety and in certain instances where a small hernia is unattended by reflux esophagitis and where the symptoms are readily controlled by medical therapy. Some patients will elect to have repair of the hernia rather than follow a life-long medical regimen of diet, medication, reduction in weight, and sleeping in the semi-Fowler's position. Hiatus hernia associated with reflux esophagitis, acute or chronic gastrointestinal hemorrhage, incarceration or strangulation of the stomach, repeated attacks stimulating coronary occlusion, fibrous strictures of the terminal esophagus, ulceration of the supradiaphragmatic gastric pouch, or persistence of symptoms after adequate medical trial are in urgent need of direct repair. Large hernias, invariably of the parahiatal type, are in need of repair because of intrathoracic pressure symptoms and the chance of strangulation of the stomach. Two instances of strangulation of the stomach are recorded in our hospital, but they did not occur during this five year study. It is to be emphasized that the size of a sliding hernia has little bearing on symptomatic complaints and the chance of complications.

It is difficult to evaluate the treatment of the 311 patients with hiatus hernia herein reported. Some patients were admitted for purposes other than the treatment of their gastrointestinal complaints and little consideration was given to the incidental discovery of a hiatus hernia. The majority of patients with hiatus hernia were admitted to the Medical Service but we were unable to appraise adequately the results of treatment. Many symptomatic individuals were discharged from the hospital to the care of their family physicians with instructions to pursue a defined medical regimen while others were treated on an out-patient basis and no follow-up studies on this group of patients were available; however, it was possible to obtain from a study of the hospital records information which may reflect the relative merit of some of the other methods of treatment. Excluding the authors series of 83 patients only 14 of the 228 remaining patients were admitted or referred for surgical repair at the Medical College of Virginia during this period of study, although 1 out of 3 patients had one or more serious complications of hiatus hernia. The results obtained in these 14 patients will be discussed in conjunction with the authors series of 59 hiatus hernia repairs. Seven additional patients were referred to the Surgical Service for paralysis of the diaphragm. Five of these patients had a good postoperative follow-up and all failed to obtain satisfactory symptomatic relief. Our experience with this procedure is limited to 4 additional patients with hiatus hernia in 3 of whom repair was necessary at a subsequent date. We do not believe phrenic nerve paralysis is a satisfactory method of treatment because the results are unreliable and the loss of vital capacity of the ipsilateral lung may be a serious handicap should pulmonary emphysema develop later. Thirty-seven patients were subjected to esophageal dilatation. Of this group 17 required from one to 13 additional hospital admissions each for the purpose of further dilatations. This leads us to question seriously the value of this type of treatment for hiatus hernia unassociated with a fibrous stricture of the esophagus. If the modern concept of hiatus hernia is correct, there is no valid reason for anticipating permanent relief by dilatation. If reflux esophagitis is associated with regional esophagospasm, it is possible to obtain perhaps some temporary relief of symptoms. Dilatation of partial strictures of the esophagus following surgical repair of hernias is not only indicated but mandatory.

Of the 83 patients referred to the authors, 59 were subjected to transthoracic repair of the hernia. Four of the remaining patients were asymptomatic, an additional 7 could be controlled by an adequate medical regimen, 5 refused operation and age and poor general physical condition contraindicated operation in 8.

The technique for repair of hiatus hernia was similar to that popularized by Allison[1] except we have attached no significance to the esophagodiaphragmatic ligament, and the hernial sac is entirely excised. The esophagus and herniated portion of the stomach are pulled through the esophageal hiatus and the cardia is anchored to the adjacent undersurface of the diaphragm. The crura of the diaphragm are approximated posterior to the esophagus by two or three heavy braided silk sutures, leaving an esophageal hiatus which will admit one finger. If there is a co-existing ulcer of the duodenum or previous gastrectomy for duodenal ulcer, and the stomach's emptying time is normal, we perform a concomitant thoracic vagotomy and a pyloromyotomy. If hiatus hernia is complicated by a fibrous stricture of the esophagus which has advanced to a place where dilatation is not feasible, it is necessary to resect the terminal esophagus and re-establish alimentary continuity. If hiatus hernia is complicated by massive bleeding from an ulcer in the supradiaphragmatic gastric pouch, it is necessary to perform a gastrotomy and control bleeding by suture ligation.

The courtesy of other surgeons in making available their follow-up studies in 14 patients has enabled us to evaluate critically the results of repair of hiatus hernia in 73 patients. All surgical patients have been followed for a period of 6 months or longer and the majority have had an upper gastrointestinal study with barium 6 months to 2 years after repair of the hernia.

Seventy-one of the 73 patients were subjected to transthoracic repair of the hernia. Of this group 6 patients had a concomitant vagotomy and pyloromyotomy for associated duodenal ulcer, 2 required resection of the terminal esophagus for advanced stricture, 2 demanded gastrotomy for control of massive hemorrhage from an ulcer situated in the herniated gastric pouch, splenectomy was performed in one for aneurysm of the splenic artery, and a segmental resection of the lung was carried out in one for an associated hamartoma. Hiatus hernias were repaired on other services in 2 patients through an abdominal approach and a concomitant duodenal diverticulectomy was performed in one. Both patients required splenectomy for the control of hemorrhage resulting from accidental tears of the splenic capsule (Table 3).

TABLE 3

OPERATIVE PROCEDURES 73 CASES HIATUS HERNIA

Authors Service	
1. Transthoracic Repair	48
2. Transthoracic Repair And:	
A. Vagotomy and Pyloromyotomy	6
B. Resection Terminal Esophagus	2
C. Gastrotomy for Hemorrhage	2
D. Splenectomy-Aneurysm Splenic Artery	1
Other Services	
1. Transthoracic Repair	11
2. Transthoracic Repair And:	
A. Segmental Resection of Lung for Hamartoma	1
3. Abdominal Repair And:	
A. Splenectomy	1
B. Splenectomy and Excision Duodenal Diverticulum	1

Cardiac arrest at the time of surgery in one patient operated on through an abdominal incision, and coronary thrombosis on the fifth postoperative day in a patient of ours account for the 2 deaths in this series. A sub-phrenic abscess requiring drainage complicated the postoperative course of one patient operated upon through an abdominal approach. The postoperative development of patchy atelectasis of the lung in 2 patients, pulmonary embolus in 1, and an acute psychosis in another did not lead to an appreciable increase in morbidity. In the immediate postoperative period, 2 instances of temporary dysphagia were caused by too tight approximation of the crura about the esophagus. The 2 patients with resection of the esophagus and esophagogastrostomy developed a new stricture at the site of anastomosis and require, as long as 2 years later, occasional dilatations. It is suggested that esophagogastrostomy be abandoned because of this late complication and that alimentary continuity be re-established by interposing a free loop of the jejunum between the esophagus and stomach. Persistent chest wall pain following thoracotomy is occasionally observed and it was troublesome in 3 patients. Recurrence of the hiatus hernia in one required a second repair. Late rupture of the diaphragm at the site of the initial incision for repair of the hernia required re-operation and closure of the defect in another patient. Fifty-one of the 71 living patients have had upper gastrointestinal roentgenographic studies six months to 2 years after operation and in no instance has a recurrence been observed other than the one previously mentioned.

The 2 patients with massive hemorrhage requiring gastrotomy and ligation of the bleeding vessel at the time of hiatus hernia repair have remained asymptomatic for over a period of 2 years. One of the patients with repair of the hiatus hernia and vagotomy has a persistent duodenal ulcer which requires a strict medical regimen for its control. Two patients show no improvement in symptoms following operative correction of the hernia. Further studies disclose in both an incompetent cardia situated below the diaphragm and reflux esophagitis. Failure to obtain relief can be ascribed to overlooking the developmental defect where the fundus of the stomach does not lie at a much higher level than the cardia (Fig. 4b). Relief of symptoms in these 2 patients will require re-operation and suture of the terminal esophagus to the cardia. Four additional patients cannot be classified as entirely cured for they have a persistence of mild upper gastrointestinal symptoms which are readily controlled by medication. Sixty-two (87 per cent) of 71 living patients subjected to surgical repair of hiatus hernia have been relieved entirely of their symptom complex (Table 4).

TABLE 4

RESULTS REPAIR 73 CASES HIATUS HERNIA

Died	2	
No Improvement	2	
Improved	7	
Cured	62	(85%)

CONCLUSIONS

1. The frequency, intractable symptoms, and proneness of hiatus hernia to the development of catastrophic complications demand that all physicians be familiar with the characteristic symptom complex, pathogenesis of symptoms, methods of diagnosis, and modalities of treatment.

2. Repair of hiatus hernias can be safely executed and will relieve the majority of patients of their symptom complex.

3. The excellent results obtained by repair of 73 consecutive hiatus hernias warrant more serious consideration of this method of treatment in the future.

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Cancer Film Bookings

Hope in the thought that 75,000 lives in America need not be lost needlessly to cancer each year is the theme of a dramatic educational film recently added to the AMA Film Library. Titled "The Other City", the film stresses the encouraging fact that doctors currently are saving one in three patients as compared with a previous one-in-four ratio. Setting of the film is Racine, Wisconsin. Four basic thoughts are developed: (1) Racine empty and lifeless; (2) a symbolic representation of what cancer is; (3) how the 75,000 inhabitants of this token city could have helped save themselves, and (4) Racine alive and bustling.

Produced by the American Cancer Society, the 16mm color film runs 22 minutes and 30 seconds. It is suitable for showings on local television as well as for church, club and school gatherings. Medical societies may book the film through the AMA Film Library.

Systemic Lupus Erythematosus An Increasing Problem

A Clinical Survey of 35 Cases

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IN RECENT YEARS, systemic lupus erythematosus has become an increasing problem in clinical medicine and has been arousing more interest from an investigative standpoint[1]. Whether this is due to an actual increase or whether due to better methods of diagnosis and more awareness of the disease is difficult to say (Table 1)[2].

TABLE I
INCREASED NUMBER OF CASES DIAGNOSED.
1948-1955 (DUBOIS)

1948-1949	11
1950-1951	44
1952-1953	35
1954-1955	54

Systemic lupus erythematosus is now classified as an inflammatory disease of the connective tissue, or as one of the collagen vascular diseases. Its exact cause is not known, but it is thought to be due to some type of hypersensitivity reaction. It is usually encountered between the ages of 10 and 40 years, is more frequent in females, and in light complexioned individuals. The disease may be either acute and fulminating with death occurring within a few days or weeks, or it may follow a prolonged subacute course over a period of some 10 to 15 years. Clinical manifestations are varied and may represent changes in a number of body systems and organs, such as the skin, joints, muscles, heart, kidney, lung, serous membranes, lymph nodes, and the central nervous system. The most helpful diagnostic test is the demonstration of the LE cell in either the peripheral blood or bone marrow. Other helpful laboratory studies are the presence of a reversed albumin-globulin ratio, a leukopenia or a thrombocytopenia.

The purpose of this paper is to record the clinical patterns established in 35 cases of systemic lupus erythematosus that were observed over a five year period (1951-56) at the Medical College of Virginia. In 32 cases the diagnosis was clearly defined and LE cells were found in the other three, although the clinical manifestations were atypical. Thirty-one were female and four male, 21 being white and 14 Negro. The age of onset of the disease ranged from 13 to 63 years: none in the first decade, seven in the second, seven in the third, six in the fourth, five in the fifth, three in the sixth, two in the seventh, and none in the eighth or beyond. In five cases the age of onset could not be established. Fourteen of these patients are known to be dead with the duration of the disease having varied from three months to 19 years.

The initial manifestations of systemic lupus erythematosus in this group of 35 cases were quite varied: 19 cases gave a history of joint involvement as the initial symptom, two dermatitis, two pyuria and hematuria, two malaise, one chest pain, one alopecia, one chills, one anemia with jaundice, and one Raynaud's phenomena. In five instances the initial symptom could not be ascertained.

Fever is the most consistent manifestation of systemic lupus erythematosus, and all of these patients gave a history of having had fever either continuously or intermittently. Twenty-four cases had experienced appreciable weight loss prior to diagnosis. (Table 2)

Joint involvement was the most common early clinical manifestation in this series of 35 cases. In 19 this was the initial symptom of the disease, and 30 of the 35 cases had joint involvement as a major symptom at some stage of their illness. The knees, hands and elbows were the joints most frequently affected. The symptoms usually consisted of migratory arthralgia, and/or stiffness, and/or tenderness and swelling, and/or increased heat. Six patients showed joint changes compatible with rheumatoid

Connective Tissue Group of the Medical Department of the Medical College of Virginia.

arthritis, but in the other instances there was no evidence of lasting or crippling disability.

Table 2

Varied Clinical Manifestations

Fever		35
Joint Pains		30
Mucocutaneous		28
Butterfly	22	
Alopecia	8	
Nail Bed	5	
Palatal Ulcer	6	
CNS Symptoms and Signs		24
Weight Loss		24
Lymphadenopathy		23
Pleurisy		20
With Effusion	10	
Cardiomegaly		16
"Allergy"		13
Palpable Spleen		6
Uremia		6
"Cytoid Bodies"		5
Raynaud's		2

Twenty-eight cases exhibited some skin or skin appendage lesion during the course of their illness. All of the seven cases which did not demonstrate some type of dermatitis were LE positive. The mucocutaneous manifestations consisted of the following: dermatitis, alopecia, nail bed changes, oral cavity ulcers, and subcutaneous nodules. The characteristic butterfly distribution of the dermatitis across the bridge of the nose was noted in 22 cases, with the lesion most often encountered being an erythematous macular eruption with scaling and pruritis. In some cases it was chronic and persistent; transient and recurrent in others. One patient volunteered the information that her condition was improved by the sun, and another that the sun did not make her worse. No information was available from our records as to the effect of sun exposure in the other cases. Eight patients manifested noticeable alopecia. Dubois[2] has stated that changes around the nail beds are second only to the erythematous macular skin eruption of the face as being the most characteristic lesions of systemic lupus erythematosus. Five patients showed these changes—usually a simple hyperemia. Six patients manifested an oral cavity ulcer associated with their dermatitis. Subcutaneous nodules were noted in six cases, and in one of these the clinical picture was that of rheumatoid arthritis. Skin and lymph node biopsies in this series were not helpful in confirming the diagnosis.

Renal involvement was a prominent feature in this series of cases. Twenty-three patients had increased protein in the urine, and 27 microscopic hematuria. Generally the hematuria was persistent, but minimal. Seven patients had a recorded urinalysis prior to their diagnosis of systemic lupus erythematosus, and four had microscopic hematuria. Twelve patients had a urine containing granular casts, and seven hyaline. These casts were not as persistent a finding in consecutive urinalyses as the red blood cells. All of the three pathological urine findings were noted in six patients. Sixteen patients exhibited low specific gravities of all urines studied. Six patients had insufficient urinalysis data for study. Blood urea nitrogen determinations were made on 31 of the 35 patients, and in six instances this was elevated and all of the patients died in uremia with hypertension. In 25 of the cases, the blood urea nitrogen was within normal limits. All of the patients who are now living have a normal blood urea nitrogen.

Twenty-two patients had central nervous system symptoms of a varied character: confusion, dizziness, psychosis, depression, tingling, numbness, diplopia, headaches, blurring of vision, "black-outs", loss of smell and taste, and nystagmus. Two patients had convulsions without an elevation of the blood urea nitrogen or the blood pressure and another, 34 years old and normotensive, died with a right sided spasticity and deviation of the eyes to the left.

Twenty-five had cardiac symptoms and/or showed signs of cardiac involvement. In the series of Harvey et al[1], 55% of the patients had detectable involvement of the pericardium, myocardium or endocardium at some time during their illness. Because fever and anemia are so frequently encountered in systemic lupus erythematosus, it was difficult to evaluate tachycardias, systolic murmurs, and accentuations of the pulmonic second sound. The electrocardiogram frequently showed nonspecific T wave changes. Pericardial friction rubs were noted in three cases; in one of these the blood urea nitrogen was elevated. The lack of autopsy confirmation in many instances made it difficult to rule out other etiologic factors as the cause of cardiac involvement. It is to be noted, however, that only six of sixteen cases with definite cardiomegaly were over 50 years of age, and consequently it was not felt that hypertension or arteriosclerosis was a prominent etiologic factor. There were eight instances of cardiomegaly in the absence of hypertension, half of whom were under 52 years of age. An elevation of the blood pressure was found in the five cases with uremia, in one presently being treated on cortisone, and in

one 58 years old. Two patients demonstrated clinical features of Raynaud's disease.

Symptoms of pleural involvement were present in 20 cases, and in ten of these there was evidence of a pleural effusion. The pleural fluid from one of these was found to be positive for LE cells. Thirteen cases had pneumonia, and twelve gave a history of a constant nonproductive cough. Pathologic reports have classified the pulmonary lesions as follows: 1. Hyaline membranes in the alveolae; 2. Focal necrosis of the alveolar walls with capillary thrombi; 3. Areas of organizing interstitial pneumonia and hemorrhage; 4. Metaplasia of the bronchiolar epithelium.

Gastrointestinal symptoms were noted in 18 cases, and consisted of the following: nausea, vomiting, diarrhea, irritable colon, constipation and rectal pain. In one instance the gastrointestinal involvement superficially resembled the sprue syndrome. Hepatomegaly occurs in systemic lupus erythematosus but is not an outstanding clinical feature; and jaundice is unusual. Seven patients had palpable livers, one of which was thought to be due to cardiac decompensation. One patient gave a history of having had anemia for 20 years which was associated with jaundice.

Lymphadenopathy was noted in 23 of the 35 cases and was usually described as a nontender enlargement, most commonly noted in the cervical chains but not uncommonly distributed widely over the body. LE cells, a relatively late manifestation, were found in all 12 of the cases which did not show a characteristically prominent lymphadenopathy. In six cases the spleen could be felt, and in one instance both the liver and spleen were enlarged in the same patient. Thrombocytopenia was present in one case showing splenomegaly.

A leukopenia of 4,500 or less was noted in 17 cases on the first day of admission to the hospital. These patients were receiving no medication. Seven of the patients who exhibited a leukocyte count over 4,500 were on steroid therapy. In the differential count the polymorphoneuclear leukocyte always predominated. Twenty-two cases had an anemia (hemoglobin of 11 gm. or less) which usually proved to be refractory to the usual forms of treatment. The Coomb's test was found to be positive in seven out of 12 cases—two with a positive Coomb's test had splenomegaly. Seven additional cases showed a platelet count of less than 150,000 sometime during the course of the disease. In 12 additional cases in which laboratory data were available, the platelet count was found to be within a normal range. In three of these the spleen was found to be enlarged. Other laboratory data were reported as follows: sedimentation rate elevated in 31; the albumin-globulin ratio reversed in 23, 16 of these having a lowered serum albumin with an elevated globulin fraction and seven having only a lowered albumin fraction with a normal globulin. The LE cell was demonstrated in 32. The three cases in which the LE cell was not demonstrated had a characteristic clinical picture of systemic lupus erythematosus. In three instances the LE cell was found, but the clinical picture was not typical of the disease.

In this series 13 reactions assumed to be due to hypersensitivity were recorded, but almost invariably they were manifested after the diagnosis of systemic lupus erythematosus had been made. These reactions were attributed usually to some type of medication or a blood transfusion, and/or were manifested by an urticarial skin eruption. Harvey[1] pointed out that, with other suggestive clinical symptoms which may not be diagnostic, the finding of a retinal cytoid body when hypertension and diabetes are not present is a helpful point in the differential diagnosis of systemic lupus erythematosus. Five cases had cytoid bodies without an elevation of blood pressure or diabetes. These bodies were present only when a clear pattern of the disease had already been established.

SUMMARY

1. Thirty-five cases of systemic lupus erythematosus observed at the Medical College of Virginia during a five year period (1951-56) have been presented.

2. The absence of a positive LE cell demonstration did not exclude the disease if other prominent symptoms were present.

3. Many signs point to the disease as being one that involves primarily the connective tissues with many and varied clinical manifestations of the joints, the kidneys, the central nervous system, the hemotological components, the heart, the skin, the lungs, the gastrointestinal tract and the lymph nodes.

4. Pulmonary and renal involvement was associated most often with a fatal outcome.

5. In our series a thrombocytopenia was not correlated with a palpable spleen.

6. Leukopenia was associated with an exacerbation of the disease in the majority of these cases.

7. Systemic lupus erythematosus was not asso-

ciated with an elevated blood pressure unless renal involvement with nitrogen retention was present.

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May Help Prevent Mental Illness

"Mood-alerting drugs" combined with good nutrition may help prevent mentally ill patients from being committed to mental hospitals, according to a Michigan psychiatrist. Writing in the November 30 Journal of the American Medical Association, Dr. John T. Ferguson, Traverse City, Mich., said general practitioners "may well take the lead in preventive psychiatry" through the use of drugs and good nutrition and the practice of the art of medicine.

He reported on the use of various neuropharmacological agents among patients with chronic mental illness at Traverse City State Hospital. The study has been conducted for four years.

In that time the new drugs, "together with the art of medicine as practiced by family doctors," have brought about many changes in the patients and the hospital. The number of wards for disturbed patients has been reduced from four to one and the number of open wards has been increased from three to four. The housekeeping is excellent, the nursing care has improved, and shock, sedation, and seclusion have been practically eliminated. The patients have taken a new interest in life and the atmosphere of the wards has become a happy one, although the number and type of personnel remains the same.

At the start of the program, only tranquilizers were used, but it was found that they helped only the overactive patients. Then analeptics (drugs that increase activity) were given to the more repressed patients. Eventually combinations of these drugs were given. They produced what may be called a "deep-change" in the patients, Dr. Ferguson said. It is a change within the patient that enables him to respond to other treatment methods and to participate in a rehabilitative program.

The combination of tranquilizers and analeptics was especially effective in confused, disoriented, and mildly overactive elderly patients, although the reasons for it are not understood. The improvement does, however, give the hope that further research and newer drugs will soon make it possible for doctors to lessen, control, and "even prevent mental changes now associated with senility."

Early in the program a direct parallel was noted between the physical well-being of patients receiving drugs and their rate and degree of improvement. Therefore, all medical and surgical problems of the patients were found and treated.

In addition, special diets and extra feedings high in minerals and vitamins were begun. Patients who had reached a "plateau" in improvement on drugs alone improved further when they were given supplementary diets. This was especially marked among elderly patients.

As the patients became more manageable, the attitude of the staff also changed. This brought about better understanding and more considerate treatment, which in turn benefited the patients.

In conclusion, Dr. Ferguson pointed out that the drugs by themselves or even when incorporated into a total hospital program will not empty the mental hospitals of the country. However, "by combining them with nutritional therapy, family doctors may hope to prevent commitment of mentally ill patients encountered in their home and office practices."

"Our Social Responsibilities"

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IT HAS BEEN SAID that a doctor should be a physician first and a citizen second. Certainly, we are citizens and as such have obligations to our community, dealing with current problems, civic and otherwise, that require attention and study in their direction or solution. These are legion in number, but there are some in particular in which our training could be used to good advantage. Among these are problems arising in connection with our aging population which problems are becoming of increasing magnitude and cost.

In 1900, 4.1% of our population were over age sixty-five. In 1955, 8.2% were above this age and by 1975, it is estimated that 13% will be above age sixty-five, making a total of approximately twenty-two million.

The principal causes of death have been reversed, as you know, from what they were fifty years ago. The degenerative diseases account for the major part of our mortality instead of the infectious ones. For example, in 1956, 56% of the deaths were due to cardiovascular disease, 18% were caused by cancer, and 6.2% to accidents, making a total of 80%. Life expectancy at birth today for the white male is 67.3 years; the white female, 73.6 years; the non-white male, 61.2 years; and the non-white female, 65.9. The overall life expectancy today is 69.5 years as compared with the average expectancy in 1900 of forty-seven years.

The attitude of society toward the aged has varied from one of veneration in the East to almost brutal neglect in the Western civilization in the past centuries. Only within recent years and of necessity have we adopted a more sensible and realistic approach to their problems. In our country, this problem has been approached from an economic standpoint by the Government in the form of Social Security and by private industry in the form of pensions. The age selected for retirement under the Social Security System, as you know, is sixty-five for men and more recently sixty-two for women, in spite of the fact that women have a life expectancy of six years greater than men. Why was the age of sixty-five selected as the age of retirement and why has it been so stubbornly and strictly adhered to? Is there any scientific or logical basis for such at the present time? At the turn of the century, such an age might have been realistic for expectancy at birth was only forty-seven years. The average person today at age sixty-five is in much better condition physically and mentally than when the idea of retirement at sixty-five was first advanced. Just why the concept that man is unable to provide for himself after this age and that he wishes nothing more than to be provided for by the community or state is so strongly entrenched in industry and government is difficult to determine.

Medical evidence and practical experience attest to the fact that no great change in the degree of efficiency, usefulness, and productivity of the average man is noted at this age, nor is retirement at age sixty-five the wish of the major part of those approaching this age limit.

Repeated surveys have been made of the rates and facts about retirement and the findings are thought provoking and revealing. One of the most recent is that of a nationwide survey made by the Survey Research Center of the University of Michigan at Ann Arbor. It reveals that four out of five American men now working would like to continue working after age sixty-five even though they should inherit enough money to live comfortably without a weekly paycheck. Some would wish to use the opportunity to change their type of work if they could, but 3/5 to 2/3 of the nation's men in the middle-class jobs would stick to the work they are doing. Professional men employed by others and sales personnel claim that their work is too interesting or provides too much prestige to quit. Skilled labor states that life without work would not seem to be worthwhile. Among the different classes interviewed, the study reveals that only the unskilled worker showed a decided difference in their attitude toward staying on the job. Almost each one of them would quit if it were economically possible.

In the not too distant future when the public becomes more aware of what Social Security is costing and of the utter disregard for the potential productive power of this group, a demand will be made, I believe, for a change in the retirement age as provided in the Social Security system. It is difficult for me to believe that a country like ours,

even with its vast resources, can continue to support such a large part of its population totally unproductive and totally dependent. Checks are going out monthly now from the Federal Government under the Social Security Act to over ten million people, with an average size check of $63.91. In another fifteen to twenty years, the aggregate of such checks could amount to one and one-half to two billion dollars monthly. Our responsibility, therefore, it seems to me, is to work with industry and with government and with every means at our disposal for a sound and more flexible plan of retirement not only for economic reasons, but for the happiness and welfare of the people as a whole.

"Putting people out to graze", as the old saying goes, is one of the most destructive and wasteful operations in life. That is contrary to our basic concept of dignity of the individual which we expound so freely. Loneliness, a feeling of not being wanted, lack of productivity and security becomes the lot of thousands of older people who have had pride and enjoyment in the performance of their work. As a result, many lose interest in life, become chronic misfits with attendant problems for society and many become mentally depressed as is attested by the admission rates to mental hospitals. The number of persons in this country from 1900 to 1950 has doubled. Those above age sixty-five quadrupled, but the number of admissions to mental institutions above age sixty-five has been multiplied nine times.

Many other problems are involved in aging from a civic standpoint, but time will permit me to mention briefly only a few of them. The question of preparation for retirement is one that is giving us concern. This problem will require the best efforts and thinking of organized labor, management, medicine, and social welfare agencies. Certainly the counsel of the medical profession in the approach to and solution of this problem cannot be minimized.

It is becoming increasingly difficult, too, for one seeking employment to obtain it after ages forty to forty-five. This in part is due to the provisions of retirement that have to be made by management and organized labor and in part to the erroneous concept that the major part of a man's usefulness is behind him at that age. We know of the potential productive power there and it is up to society to avail itself of its use. During the recent war, when manpower was at a premium, people within this group and those above age sixty-five did an outstanding job. What they may have lacked in speed and agility was compensated for in interest, know-how, and loyalty to the job.

Another problem inherent in aging is that of providing ample facilities for the care of the aged which is most important. Nursing homes with adequate equipment, care, and facilities are relatively few in number. Private industry, instead of Government, should provide such and on a basis which the average individual can afford. In referring to this problem, I do not mean to infer that it is the obligation and responsibility of the medical profession alone, but we do have an obligation to society to direct its thinking along the proper channels if we hope to effect a satisfactory solution.

The Gerontologists vow that they are not only going to "add years to life but life to years". Can anyone deny that continued activity and work is not essential to this goal? Likewise, can anyone deny that our present economic order is at cross purposes with this concept?

Another problem facing us today is the cost of medical care and how it is to be financed. The public has elected to pay for the major cost of their illnesses as well as most of their bills of any significance on a prepayment or budget basis. This method of payment has come about by the changes in our overall economic system. Most physicians would prefer to retain their old system of arranging the fee for the service rendered in each case personally between himself and the patient. That, however, seems to be contrary to the wishes or methods of the public and if we are to retain any remnant of our basic freedom, the doctor-patient relationship, it looks as if we shall have to fall in line. Distribution of medical care is a social problem and is being demanded by all strata of society. Making that care avaiable to all who are not medically indigent at a cost that they can afford to pay on a prepayment or budget basis is our job. If this is not done, the Federal Government will take over.

History shows, so someone has said, that socialization begins with medicine. If this statement is not correct, we know that it has played a large part in the socialized state. Many physicians in this country are of the firm conviction that if it had not been for the Blue Cross and Blue Shield plans, this country would have gone down the road of medical regimentation as has England and many other countries which have succumbed to this form of state domination. Within the past year, the following statement was made before the Tenth Clinical Meeting of the American Medical Association by one of its past

presidents: "Today's professional freedom to be a private practitioner of medicine, instead of a slave of Government, is due solely to Blue Shield, the physician's answer to socialized medicine."

Blue Cross, as you know, had its beginning at Baylor University in Texas in the mid-1930's during the depression and the plan proved to be successful. The idea spread to the Northwest where a similar prepayment plan was put into effect for medical care in the states of Washington and Oregon. In the early 1940's, extreme pressure was brought to bear upon the Federal Government to provide medical care and it was at this time that the American Medical Association took an active part in encouraging the development of prepayment plans by the medical profession. Shortly after this, around 1944 or 1945, the larger insurance companies saw the handwriting on the wall. They knew that if Government could provide for medical care, it likewise could provide all of the insurance that the public needed. As a result, they entered this field largely as a public service and to prevent, if possible, the further intrusion of Government in private enterprise. The results have been very dramatic as is attested by a report of May 1, 1957, from the Health Insurance Council which reveals that 118,000,000 people are now covered by hospital insurance; 103,000,000 by surgical protection; 67,000,000 by some form of medical expense; and 10,000,000 by major medical expense. In spite of this phenomenal growth in prepayment medical care, the trend of socialization of medicine in this country has not been eliminated.

According to a recent report submitted by the American Medical Association on the Veterans Administration, old age benefits in medicine, Medi-Care, and other trends we can readily see that this trend is ever present, and I quote: "National legislators have not held back on the sponsoring of many health and medical bills. They cover just about every phase of medicine and human welfare. Most of them never get past the Committees. But, as an indicator of the growing interest in health legislation, the following figures on the bills introduced are illuminating, namely, 250 measures in 1951-52 in the Eighty-Second Congress, 407 measures in 1953-54 in the Eighty-Third Congress, and 571 measures in 1955-56 in the Eighty-Fourth Congress.

"Some of the greatest activity in the health field has involved laws and amendments to laws that widen the scope of medical care for Federal beneficiaries. The latest is Medi-Care voted last year for military dependents. Today nearly one out of every four persons, including twenty-two million veterans, is eligible to receive these benefits at no cost for some degree of medical care from the Federal Government."

As citizens, we owe it to ourselves to take an active part in civic affairs which have to do with the various social and welfare agencies, community health programming and planning, education, recreation, etc. Too often, we have failed to establish vital contact with such groups which failure has not been in the best interest of the community or of ourselves. If leadership in fields particularly relating to our profession is not proffered by us, it will be filled from other sources.

And finally, we have the obligation, too, to contribute in proportion to our material means to the Community Chest and other community projects the same as other citizens. We, as a group, have been criticized and rather severely in the past along those lines. The same criticism has been applied to other professional groups in our city. This criticism, however, does not seem to be particularly local to us for one of the recent past presidents of the American Medical Association had this to say in the Opening General Assembly before the Tenth Clinical Meeting of the American Medical Association in Seattle, Washington on November 27, 1956; "Too frequently we feel that we contribute so much free service to patients that we should not even be asked to contribute to the voluntary charities of our communities. There is no more fallacious argument than that. We probably as a class have the best incomes in the community, and we are just as much if not more obligated to do our fair share financially as are any other members of the community. This one great failure of ours causes our patients and friends to raise their eyebrows when we fail to meet voluntarily our fair share of community giving, and I am sorry to say that we have failed miserably in this aspect of our community obligations."

As a group, we receive preferential treatment by all strata of society and of government. Is it not more than right that the relationship should be reciprocal?

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February Is Heart Month

The Month of Hearts is February. Not only is it the month for special expressions of sentiment from one heart to another, it is also the month for giving special consideration to the health and welfare of one's own heart and the heart of everyone he loves. For the Virginia Heart Association, its chapters and councils, as well as for the American Heart Association—whose particular interest is heart health—February is Heart Month.

Whatever our way of life, our future depends upon our heart. No one is immune to heart disease. Since ten million Americans suffer from heart diseases, the lives of millions now living may depend on the speed with which medical science discovers ways of preventing and treating hardening of the arteries and high blood pressure. These two disorders account for nearly 90 per cent of all heart and circulatory diseases.

During the past nine years more than 25 million Heart Fund dollars have been allocated for heart research. Part of this fund was contributed by Virginians to support various phases of the Heart program of research, education, and community services. Heart associations in Virginia are conducting a number of "Heart" activities.

Four heart research projects are being supported at the Medical College of Virginia and at the University of Virginia School of Medicine. In addition, two cardiovascular fellowships in internal medicine and two fellowships in cardiovascular surgery are being supported at the same institutions. These fellowships are for the continuing education of graduate physicians who have shown outstanding ability and interest in the field of heart disease. Financial support for the studies in Virginia amounts to $30,000.

For the 1957-58 fiscal year an additional $42,000 raised by Heart associations in Virginia went to the American Heart Association for support of its national research program. "Heart research anywhere helps hearts everywhere."

Through films, exhibits, radio and TV programs, the conduct of study units on heart diseases, and the services of speakers, the Heart educational program is carried to the public. Professional seminars are held for physicians, nurses, teachers, and allied professional groups. Summer scholarships are provided for high school science teachers for the study of the major diseases of man. Educational programs in the prevention of rheumatic fever are being conducted throughout Virginia for the general public. Heart models are being donated for use by student nurses and high school science classes.

Community service programs designed to help heart patients live useful, happy lives are being conducted in various localities throughout Virginia. These include an occupational workshop, a demonstration home care program to enable cardiacs to be released from hospitals to the care of their personal physicians earlier than normally would be expected, loan closets of sickroom equipment for homebound heart cases, and five diagnostic heart clinics for the indigent. Local Heart chapters have provided equipment to clinics and hospitals and oxygen inhalators and tents to several rescue squads. Virginia Heart Association has allocated $3,000 for the purchase, this fiscal year, of oxygen equipment for rescue squads and life saving crews in areas not served by local Heart associations. One chapter is supporting a blood vessel bank, making vessels available to surgeons for replacement of diseased blood vessels. Another chapter has established a work evaluation unit to determine a cardiac patient's work capacity in order to fit him to his job. The Virginia Heart Association helps to support the Virginia Craft Guild which develops the production of quality handicraft by disabled persons.

During the month of February the Virginia Heart Association, its chapters and councils, will conduct a campaign to raise funds for the continuation and development of Heart programs. Major General John T. Sprague, United States Air Force (Ret.), is campaign chairman, and Mrs. R. G. Boatwright, Coeburn, a past president of the Virginia Federation of Women's Clubs, is co-chairman.

Since no one is immune to heart disease, everyone is asked to contribute to the Heart Fund, remembering that when he helps his Heart Fund, he is helping his own heart.

—E.H.S.

The Responsibility of the Medical Profession In the Prevention and Care of Automobile Crash Injuries and Deaths

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DURING the past thirty years the number of automobiles has increased three times, from 20 to 60 million. The death rate per 100 million miles which was 19 thirty years ago has now been reduced to 6.4. The credit for this happy result is due to the automobile manufacturers, the police and the many fine, local, state and national safety organizations, whose indefatigable work over the years made this reduction possible. Unfortunately this figure is now practically a static one, and only by running hard can we hope to stand still.

The doctors who are called upon to pronounce death or treat these unfortunate victims, night and day, are greatly concerned with the fact that, although the rate is now down to 6.4, there is a slow but steady increase in the total number of deaths and injuries, which this year is expected to reach at least 40,000 and one and a half million. Of this number of injured 20% will be classified as from severe to critical. In all our wars less than one million men have been killed. The automobile counted its one millionth victim more than four years ago and the rate has been accelerating since with increased horse power.

The number one health problem in this country today is the carnage created by the automobile. The Institute of Life Insurance says highway accidents in the past four years cost them more than did World War II.

Cardiovascular diseases and cancer are our leading causes of death but the automobile rate is close behind if figured on man years of life lost, for the first two are primarily diseases of the older age groups whereas the automobile fatality rate is highest in our younger age group.

In a search for the causes of this tragic toll each year, three factors stand out above all the rest.

1) The drinking driver: He is estimated to be involved in one half of our fatal crashes.

2) The speeding driver in one third. He is also listed as reckless, driving on the wrong side of the road and is a frequent contributing factor in the drinking driver crashes.

3) Poorly designed automobiles from a safety standpoint. For instance, the average steering wheel collapses on impact at 12 m. p. h. leaving the steering post as a lethal projection. Also, an unrestrained passenger is unable to protect himself from injury on impacts of 12 m. p. h. and, if thrown out, his chances of being killed or injured are twice as great. The many projecting buttons and knobs and unpadded areas, along with many other poorly designed features, also contribute to the large number of deaths and injuries directly due to poor design.

It is welcome news that the Automobile Manufacturers' Association have now agreed to minimize speed, acceleration and horse power in their advertising, and I am sure the average youngster will be less inclined to check on these fantastic claims if he is not daily confronted with them. I also believe their assumption that the average mental age of the buying public is twelve years will have to be revised upward.

As a result of our studies we are convinced that if drinking driving, speed and recklessness are controlled and if improvements in automobile design are provided the present appalling toll of deaths and injuries can be substantially reduced, perhaps by one half. We are further convinced that enough facts are at hand to accomplish this goal now.

A certain basic number of accidents are inevitable in our complex and mobile society but the number is at present far too high. If 20,000 lives can be saved each year by employing these suggestions, then why not let's employ them?

From the Department of Otolaryngology, University of Virginia Hospital, Charlottesville.

WOODWARD, F. D., *Chairman—A.M.A. Committee on Medical Aspects of Automobile Crash Injuries and Deaths.*

Read at the annual meeting of The Medical Society of Virginia, Washington, D. C., October 29, 1957.

If the doctors had waited until all the facts were at hand before starting the control of typhoid, smallpox, malaria, yellow fever, venereal disease and polio as examples, then the control of these scourges would have been long delayed, and since we now have enough facts to begin the control of our number one public health problem then it is certainly the doctor's business to advocate and employ these preventive measures.

Since the number one killer is a drinking driver and since repeated tests have shown that driving skill deteriorates at an alcohol blood level of 0.03 to 0.05% then let's make 0.05 the critical blood level for conviction instead of 0.15, a far too generous figure. Let's make the employment of chemical tests mandatory in suspected cases or else provide an implied consent law. Let's make the results of chemical tests acceptable as evidence, and finally let's enact and enforce adequate laws without fear and with complete impartiality.

Speed is our number two killer. We now have many limited access super highways and, with unlimited horsepower, the timing between safety and crashing is only a split second. Since the motorist is still an average, and not a super, driver we must be realistic in establishing speed limits and ruthless in their enforcement. 30 m. p. h. in urban zones and 60 m. p. h. on the highway during the day and 55 m. p. h. at night are certainly reasonable, and if the traffic officer allows a 5 m. p. h. tolerance for the violator there should be no valid objection to them or their enforcement. Of course, these limits should be uniform throughout the country.

According to the conclusions of McFarland and Moore whose recent article was published in the New England Journal of Medicine, more continuous attention is required of the driver of a motor vehicle than of the operation of any other type of vehicle and that the attributes with the greatest bearing on accident rates are low intelligence, youth and weak or absent responsibility. In other words, "a man drives as he lives." In addition to the personality factors is the physical condition of the driver. Fatigue is always a danger. Sedatives and tranquilizing drugs can dull a driver's skill and the rates soar with the increased consumption of alcohol.

In order to combat speed as a killer let's ask for more traffic officers and back them up with adequate laws and enforcement.

As for the number three killer of automobile design we must again educate the public to demand safety features as standard equipment, and in order to hasten this day we must back the thoughtful members of Congress who are at this time considering federal legislation to require the various manufacturers to meet certain basic and proven safety features in their product.

As it stands today the destiny of thousands rests in the hands of a comparative handful of men who are the designers and automotive engineers. They decide what next year's cars are to be like, without benefit of medical advice or consultation. Many useful life saving suggestions have been made over the years and have been consistently ignored.

The American Medical Association realized that a certain undetermined percentage of accidents are caused directly or indirectly by medical conditions, drugs and other related physical factors and that it was our first duty to clean our own house.

To this end the Board of Trustees of the American Medical Association established a Committee to study the medical aspects of automobile crash injuries and deaths in 1955. This Committee sponsored a symposium on this subject in June 1956 at the Chicago Meeting. It is now preparing a book to serve as a guide to physicians in determining fitness to drive as related to the medical background of the individual. When completed this book will advise the physician relative to his patient's driving limitations that may be involved in: (1) physiological states, (2) pathological conditions, (3) emotional disturbances and (4) drugs and alcohol.

In addition to the guide to physicians a pamphlet will be written at the popular level concerning the more commonly encountered medical situations. The patient will then have the advantage of something in print which will guide him as to whether he should or should not drive, and if so under what safeguards.

There is little doubt that a great deal of attention must be given to the very serious question of who shall be permitted to drive an automotive vehicle and who shall be denied that privilege. We emphasize that driving should be a privilege and not a right.

The third objective is to develop better medical standards for driver licensure. A guide will also be prepared for examining police officers and for state agencies concerned with licensing. We hope that each State Medical Society will appoint a committee on Traffic Safety which would be in a position to advise and assist state driver licensing bodies in their efforts to improve medical standards in licensing.

Similar Traffic Safety Committees should be ap-

pointed by County Medical Societies. They would promote the extension of emergency first aid training to as many citizens as possible. This training will be of value not only with the reduction of the severity of automobile crash injuries but also will serve the needs of Civil Defense. We also feel that it is desirable to equip all automobiles with first aid kits.

Related to first aid is another objective which is to see that proper and adequate emergency transportation is provided in their local community. We hope to accomplish this work through State and County Medical Societies. Since the drivers of ambulances frequently abuse their privileges we feel that all sirens should be removed and that the ambulance as well as all other emergency vehicles should obey all traffic regulations.

As citizens and physicians we feel that accredited driver training schools should be established for all high school level students. Similar schools should be provided for the public, and all applicants for licensure and all re-applications after suspension or revocation of their license should be required to present a certificate from such a school, certifying that they have successfully passed the course. In addition to the driver training school certificates we hope the day will soon come when a certificate from a physician will also be required, certifying to the physical and mental fitness of the applicant.

Referral clinics staffed by physicians and psychologists should also be established. It would be their duty to pass on the fitness to drive of repeat offenders, those referred to it by the police, the court, the physician and those past 65 years of age at the time of their date for re-examination.

As to definitive care of the injured the physician is justifiably proud. The results in World War II were much better than World War I. There was a further improvement during the Korean conflict. Prompt and efficient first aid, better and prompt transfusions, the treatment of shock, more blood transfusions, better anesthetic techniques, the use of antibiotics to control infection and improved surgical techniques were all responsible for this gratifying improvement.

The A. M. A. Committee intends to invite representatives from all State Medical Societies to meet with them in San Francisco in June 1958, at the time of the annual meeting. A uniform group of objectives will be presented for discussion and consideration by all State Medical Societies.

As evidence of the interest in the subject by the entire medical profession and the conviction that something can and should be done toward prevention of accidents and injuries, I wish to quote a resolution adopted by the House of Delegates of the American Medical Association at its meeting in Boston, December 1, 1955.

Whereas, Traffic accidents in the United States claim 38,000 lives and 1,250,000 injured each year with a probable 45% increase in vehicle mileage in the next ten years and

Whereas, The death and accident toll could be materially reduced through improvement in automotive safety design and construction and

Whereas, All other modes of public transportation except automobiles are already safeguarded by Federal safety standards:

Therefore be it Resolved: That the American Medical Association through its House of Delegates strongly urges the President of the United States to request legislation from Congress authorizing the appointment of a National Body to approve and regulate safety standards of automobile construction.

On January 9, 1956, Dr. George F. Lull, Secretary and General Manager of the Association, addressed a letter to President Eisenhower in which he directed attention to this resolution.

The magnitude of this problem is well recognized by the medical profession. The epidemiology is understood. The remedy is known and available, so why not let's get on with the treatment?

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The Prevention of Injury in Automobile Accidents

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THE IDEAL WAY to prevent death and injury from automobile accidents is, of course, to prevent the accident. However, this approach alone has not been sufficiently effective in the past and I doubt very much if it will be in the foreseeable future. Despite the intensive efforts which have been made by law-enforcement agencies, safety councils, legislators, highway engineers, automotive engineers, and others, automobile accidents continue to cause death and suffering. While the death rate per 10,000 vehicles on American roads has dropped from 8.7 to 6.2 and the death rate per 100,000,000 vehicle miles has dropped from 8.8 to 6.4 over the last ten years, the death date per 100,000 population, which reflects the true effect of accidents on the American public, was 22.8 in 1947 and was 23.9 in 1956. During these ten years this death rate has varied only from a low of 21.3 in 1949 to a high of 24.3 in 1952.[1] Because of the increased number of vehicles on the American road and the increased number of miles they are driven, the effect of automobile accidents on the American public is remaining about the same, despite all of our safety and accident programs and great improvement in our highways, our motor vehicles, and our traffic control. It is probably impossible to make any estimate of how much effect improved surgical and hospital care, including the availability almost everywhere of adequate quantities of blood, and antibiotics, have had in holding down the death rate, but it undoubtedly has been considerable.

It is only within recent years that attention has begun to swing toward the prevention of injury when accidents do occur. At first glance, this might seem somewhat fatalistic in outlook, but the fact remains that despite all of our efforts accidents do occur and probably will continue to occur as long as fallible human beings drive automobiles, since most automobile accidents, like aviation accidents, are due to "pilot error" rather than to defects in the highway or the automobile.

In considering the prevention of injury when accidents occur, certain trends in deaths and injuries over the years are of interest. As might be expected, accidents involving animal drawn vehicles or animals have decreased markedly, as have accidents involving street cars. Accidents involving railroad trains have decreased slightly, while accidents involving other motor vehicles, fixed objects, and non-collision accidents have increased. Perhaps the most striking trend has been the decrease in pedestrian deaths—from a high of 15,500 in 1937 to a low of 7,950 in 1957—a decrease of 50% in 20 years. There has, of course, been a corresponding increase in deaths of automobile occupants.[1] Pedestrian deaths are most common below the age of 14 years and from 50 years upward, with sharp increases in the upper age groups. The low incidence of pedestrian deaths in the teen-age and young adult groups quite likely is attributable to pedestrian safety education in most schools for the last 20 or more years. This suggests the advisability of requiring formal approved driver training courses before the issuance of drivers licenses. The high incidence in the older age group is probably due to increasing defects of eyesight, hearing, and agility. It is of interest, also, that in the state of Delaware, where it is the policy of the State Police to obtain blood samples from all victims in fatal automobile accidents, that 83% of the adult pedestrians killed have been drinking and 70% had .15% or more alcohol in the blood, indicating intoxication. In another small series of fatal pedestrian accidents in Montana, 23% of the victims had been drinking and in reports from 19 states 22% had been drinking. In 1956, country-wide, 66% of the deaths occurred at speeds of 50 miles per hour or less which are generally considered safe speeds. Fifteen per cent occurred at speeds from 51 to 60 miles per hour, 10% at speeds from 61 to 70, and 9% at speeds of 71 miles per hour and over. Thus one sees that practically two-thirds of the deaths occur in accidents at low or moderate speeds.[1]

R. ARNOLD GRISWOLD, M.D., *Member, Sub-Committee on Engineering Aspects of Automobile Injuries and Deaths; Member of Committee on Trauma of the American College of Surgeons.*

Presented before the annual meeting of The Medical Society of Virginia, Washington, D. C., October 27-30, 1957.

Dangerous speed is a relative rather than an absolute factor, but hurry at any speed may be fatal.

It may be of interest to review some of the past influence of automotive design on injuries. Many of us can remember when one of the most frequent injuries was the fractured wrist from a kick-back while cranking the car. At one time many severe lacerations were caused by sharp plate glass which has been replaced by safety glass. In the day of high wheels and two-wheel brakes, the "bumper fracture" was a fracture in the region of the knee joint. Sometime in the 30's when smaller wheels and four-wheel brakes with change in weight distribution caused the front bumper to dip downward when the brakes were applied, the bumper fracture became a fracture of both bones of the leg well below the knee. The "traffic elbows" which occurred in side-swipe accidents when an occupant's elbow was resting outside the door have decreased, probably due to changes in interior design, making it more uncomfortable to keep the elbow in this position for a long length of time. At one time many doors were hinged at the rear, causing them to fly open by wind pressure if insecurely latched, and many people were pulled into the highway when attempting to adjust such doors while the car was in motion. Today practically all automobile doors are hinged at the front, eliminating this danger. Spear-pointed door handles which impaled many pedestrians have been replaced by smoother handles. There are, of course, still some spears in the hood ornaments, but it is improbable that these, because of their location, cause many pedestrian injuries. It will be of interest to see what changes in pedestrian injuries may occur from the present styling in which the headlight visors are in a vertical line upward from the bumper, so that the pedestrian is likely to be hit in the trunk area by these visors at the same time that he is struck in the legs by the bumper. Off hand one would expect an increase in the number of ruptured spleens, livers, and other abdominal viscera in pedestrians.

Before automobile engineers can make changes in design to minimize injury to motor car occupants in case of accident, it is necessary that they know what injuries are most important and how they are caused. This is information which can come only from the medical profession and from police officers and other competent observers who investigate crashes. Several recent studies have been made by the automotive crash injury research project of the Department of Public Health and Preventive Medicine at Cornell University and others.[2,3,4,5,6] These studies have shown that head injuries which are the most frequent are also the most frequently fatal. Next in fatal frequency come injuries of the thorax, then the neck and cervical spine, abdomen, pelvis and lumbar spine, and last the extremities. In non-fatal injuries the percentages are different, with many more extremity injuries, minor head injuries, etc. The most striking feature of some of these studies has been the frequency of multiple injuries to two or more body areas. As one reaches the more serious degrees of injury a large proportion of the victims are "hurt all over".[2]

Studies likewise have shown what components of the automobile are most likely to cause injury. The Cornell group[7] showed that the most dangerous seat is the right front seat, as would be expected, and that the rear seats were the safest, although the driving seat is about as safe as the rear seat. However, many more drivers than passengers in any of the other seats were injured, due to the fact that every car has a driver, often alone. In pre-1956 models, one or more doors opened in 52% of the crashes and complete ejection of one or more of the occupants occurred in 13.6% of cases of open doors. Ejection was an extremely important factor as it more than doubled the risk of moderate to fatal grade of injury. A major cause of injury of any degree was the steering post, but the major cause of dangerous to fatal injury was ejection from the car. Following these two factors in importance came injuries inflicted by the instrument panel, the windshield, the top of the front seat, door structures, the back rest of the front seat—lower portion, the front door corner post, flying glass, top structures, and last the rear view mirror.

As a result of these investigations several important facts have emerged:

1. That with certain very obvious exceptions the passenger carrying compartment of the modern automobile is fairly substantial and is capable of protecting the occupant in most crashes.

2. That the automobile occupant is most frequently injured by being thrown outside the car or against objects in the interior of the car.

3. Knowledge of the objects in the interior of the car which cause injury.

With these facts in mind one may then employ the principles used in packaging delicate articles for shipment. These principles are:

1. A container which will withstand probable or foreseeable impact without crumpling.

2. Fixation of the object to be shipped within the

container so that it does not rattle or fly around within the container.

3. Appropriate padding at the spots where the object may come in contact with the interior of the container.

Recently, attempts have been made to apply these principles to automobile design. Straith,[8] twenty years ago, advocated collapsible steering posts, padding of the dash, and the removal of injury producing proturberances from the interior. Sheldon,[9] Campbell,[10] Wenger,[11] and others in the medical profession have made valuable contributions along this line. In February 1955 a resolution from the Committee on Trauma of the American College of Surgeons was sent to the automobile manufacturers recommending that "they stress occupant safety as a basic factor in automobile design to include:

1. Doors which will not open on impact,
2. Seats and cushions which will not become displaced on impact,
3. Energy absorbing interiors,
4. Adequate safety belts or other passenger stabilizing devices that would resist impacts of at least 20 G's."

Similar resolutions have been passed by the American Association for the Surgery of Trauma, the American Academy of Neurological Surgery, the Colorado State Medical Association, The Arizona State Medical Association, and the House of Delegates of the American Medical Association.[12] Following and perhaps partly because of these actions, certain changes in automotive design were made in 1956 models. In that year all of the major manufacturers installed one or another type of safety door latch to prevent doors from flying open on impact. The Ford Motor Company pioneered the "deep dish" steering wheel to prevent or diminish contact with the hub and to distribute crash forces more evenly over the trunk. This was standard equipment and in the 1957 models of most of the manufacturers some variation of this steering wheel has been standard. Ford has installed as standard equipment an adjustable front seat track which will not come loose on impact. In 1956 Ford first offered adequate padding for the instrument panel and windshield header and also safety belts as optional equipment. Since that time, other manufacturers have adopted various degrees of padding of the interior as optional extra cost equipment and have made seat belts available as optional extra cost equipment. It is to be hoped that this trend toward modifying the interior design of the passenger carrying compartment to prevent injury will continue and that more of the safety factors will be made standard rather than optional at extra cost, since the larger segment of the American public seems more interested in buying such extra cost items as two-tone paint jobs or white sidewall tires than safety appliances.

In 1956 and continuing in 1957 a special subcommittee on traffic safety of the Committee on Interstate and Foreign Commerce of the House of Representatives, chairmanned by the Honorable Kenneth A. Roberts of Alabama, has conducted far reaching and thorough investigations into the problem of traffic fatalities and injuries. They have accumulated information from manufacturers, research institutions, medical organizations, highway and traffic authorities, and many other pertinent sources. This comprehensive and voluminous investigation when digested will, I am sure, point the way toward improvement not only in the overall accident picture but in the prevention of death and injury when accidents do occur.

The new safety measures introduced in 1956 and 1957 cars have not been in use long enough in enough cars to give any large statistics as to their effectiveness. However, investigation of a small series of crashes has shown considerable improvement in the frequency of doors opening on impact, ejection on impact, and from the use of safety belts. The Cornell[13] studies on 1956 cars involved in crashes showed an improvement with respect to doors opening of 20.1% in roll-over accidents, 33.6% in non roll-over accidents, or 26.6% for all accidents. The improvement in incidents of ejection and risk of fatal injury was even more striking, and was 48.7% for risk of ejection and 29.0% for risk of dangerous to fatal degree injury.

The most striking improvement was in a small group of cases in which occupants wearing seat belts were compared with occupants without seat belts in accidents in which by careful selection from over 4000 controlled cases it was possible to match closely 81 cars without seat belts with 81 cars with seat belts. The controlled group and experimental group of cars were identical as to type of accident, area of principal impact, direction of principal force, speed of impact, frequency of doors opening, number of cars per accident, make of case car, weight of case car, year of manufacture of case car, and seated area of occupants. The results in this small series show a significant maximum improvement of 60.4%. Some injury was experienced by 75.5% of those without belts and 29.9% of those with belts. Mod-

erate to fatal degree of injury was reported for 23% of those without belts against 9.2% with belts. Dangerous through fatal grade injury was reported as 3.6% without belts against 1.0% with belts. This small carefully controlled group confirms the reports of Campbell[14] and the opinion of others in regard to the advisability of wearing seat belts at all times when cars are in motion and that a properly installed lap belt is probably the best means of insuring against occupant injury in the automobile of today. This was indicated by DeHaven in the study of over 1,000 light plane crashes at impact speeds comparable to or above that of the usual automobile crash.[15] Objections that seat belts would in themselves cause injury have been effectually answered by DeHaven and Colonel John P. Stapp.[16]

Since it takes about ten years to get obsolete automobiles off the American road, it will be some time before these measures have any great effect on the average American motorist. I do not believe anyone, even the automobile manufacturers themselves regard the safety measures of 1956 and 1957 as perfect. There are still many dangerous factors in present automobile interior design which may take considerable time to correct. Even with the strongest automobile bodies and interior padding as effectual as practical, the problem of maintaining the passenger in his seat so that he does not crash against the interior of the package is of primary importance. At the present time this can only be achieved by a safety belt of one type or another. Belts utilizing shoulder straps are perhaps more effective but are less likely to be used than is a simple lap belt because of the increased inconvenience of putting them on and the fear, by women particularly, that the straps may muss their clothes. The lap belt is the most effective compromise that we have at present, although admittedly not perfect. When one realizes that in the State of Indiana 75% of the deaths occur within 25 miles of the victim's residence it is evident that this protection should be used on short as well as long trips. The simple lap belt is much more likely to be worn by the housewife on trips to the grocery and by the head of the house on trips to and from work than is a more complicated device, and it does give adequate protection against the type of crashes which cause the majority of our deaths.

Improvements along these lines which we can expect to come spontaneously from the motor car manufacturers are probably very few. The automobile manufacturers are in business to sell cars and they will make and sell the kind of cars which the American public demands. From a business standpoint they naturally have very sensitive ears to such demands, but we cannot expect them to increase the cost of the cars which they sell by building into them features which the American public does not desire.

What, then, can we as physicians, who know the problem perhaps much better than the public at large, do to improve a situation which effects not only us but our families, friends, and patients? First, we can demand that in the cars which we buy adequate safety factors be provided, including proper padding, non-displaceable seats, and safe doors, and that safety belts are not only installed but used. Secondly, we can impress on our patients and the public individually and collectively the importance of these factors, particularly the use of safety belts, which no manufacturer can force, so that the manufacturers may truly know that selling safety is profitable business.

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332 West Broadway
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The Legislative Aspects of Traffic Safety

KENNETH A. ROBERTS
Washington, D. C.

I AM VERY HONORED to have been invited to speak before this group of very distinguished medical men who have done so much to bring about greater safety on the Nation's highways.

As Chairman of the Special Subcommittee on Traffic Safety, I am very much aware of the early advanced work, research, and thinking done by the medical profession regarding highway safety. I feel that the American public enjoys greater safety in its new automobiles today, as a direct result of the pioneer work done under the outstanding leadership of Dr. Fletcher Woodward and the very able members of his Committee on Medical Aspects of Automobile Injuries and Deaths. The citizens of our Nation are indeed indebted to you men who have devoted so much of your personal time to their welfare. I am sure that it must have been gratifying to you to have seen the *proof* of your recommendations for automobile design changes—such as seat belts, recessed hub steering wheels, dashboard padding, and safety door locks which were incorporated into many of the 1956 cars—reflected in the accident statistics collected by Cornell's Automobile Crash Injury Research.

The Subcommittee on Traffic Safety is indebted to you, for much of its work and ensuing recommendations are based upon the scientific work performed by the medical profession. A good example, which I believe illustrates how the subcommittee utilizes the research of the medical experts and also in turn aids the medical men in implementing their recommendations, is seen in the recent controversy on the merits of automobile seat belts. The subcommittee sat as an impartial forum, vested with only the public's interest, and held extensive hearings to determine the crashworthiness of seat belts in an effort to resolve the confusion existing in the public's mind created by the many conflicting stories carried in the press on the value of seat belts. Both proponents and opponents were invited to testify. The witness list included along with the medical experts, researchers, Government officials and representatives from each of the five leading American automobile manufacturers. Dr. Griswold, who has spoken here today, made an extremely valuable contribution to these subcommittee hearings.

The complete text of these hearings should be available, free of charge, to the public within the next few weeks so that anyone who wishes to read the data exactly as it was presented to the subcommittee may do so and may form his own opinion on the value of seat belts. The subcommittee, after careful study and consideration of all the testimony presented at the hearing, also filed a report which contained its own opinion on this safety device. In its report, the subcommittee stated its conclusion "favoring the installation and use of this safety device."

Having read the published papers of many of you doctors, I realize that you long ago recognized the value of a seat belt in a crash and I sincerely hope that the subcommittee's work will have further alerted and encouraged the public to use this truly life-saving safety device.

In order to assure the public that when a seat belt is purchased it will provide the safety expected, I have introduced legislation which would require that any automobile seat belt shipped in interstate commerce must contain certain specifications established by the Bureau of Standards. It is my hope that this bill will be approved in the next sesson of Congress.

Another legislative proposal I also hope will become law in the next session of Congress, is the bill I have sponsored to provide Federal funds to assist the individual states in establishing driver education courses. The subcommittee held hearings on this bill in the last session, but a shortage of time prevented the subcommittee from taking any further action.

In my opinion, the inclusion of driver education in the school curriculum can be of considerable value in teaching future drivers good habits and good manners as well as developing their mechanical skill in handling today's powerful machines. This training would naturally contribute to greater highway safety; and as one witness testified, we cannot challenge the value of driver education without also

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Statement before the Panel, Prevention of Automobile Injuries and Deaths, by Hon. Kenneth A. Roberts (D., Ala.) United States House of Representatives; Member, Committee on Interstate and Foreign Commerce; Chairman, Special Subcommittee on Traffic Safety.

Presented before the annual meeting of The Medical Society of Virginia, Washington, D. C., October 27-30, 1957.

challenging the value of education itself. I would also like to point out that several studies made of young people who had had driver training indicated a substantial reduction in accidents and traffic violations. Recognzing this fact, some of the insurance companies now do not raise the rates in families, with young persons driving the family car, providing the young persons have had driver training. This past week the New York Times carried a story that safe-driving instruction for the Westchester County Parkway Police had reduced their own accidents by 50 per cent. In my opinion this indicates again the value to be gained from proper driving instructions. Several states by law now require that young persons seeking driver licenses must take a driver education course first.

Due to the fact that some states cannot afford to establish such education courses, and because I believe that such education will be of great value in increasing safety on the Nation's highways, I expect to work very hard in the next session of Congress to have this legislation adopted.

Another bill which is pending before the Special Subcommittee on Traffic Safety and which I think would be very valuable to safety, if enacted, is House Joint Resolution 221, sponsored by my very able colleague and member of the subcommittee, Congressman John V. Beamer of Indiana. The purpose of the bill, sponsored by Congressman Beamer, is to grant the consent of Congress to the several states to negotiate and enter into compacts for the purpose of promoting highway traffic safety. In supporting his bill, Congressman Beamer told the subcommittee: ". . . It is essential that the laws regulating traffic safety be brought up to date. It is of equal importance that there be some method of making these laws more standard among the many states in order that people traveling distances will have a better understanding of the laws and rules governing the flow of traffic." The enactment of Mr. Beamer's resolution would grant the consent of Congress to the several states to join in the formulation of a body that would have authority to legally prepare and promulgate legislation and regulations, if needed, to meet the serious problem of such losses in human life and property now occurring on the Nation's highways.

Through such an interstate compact, the states could act jointly and cooperatively to solve a considerable portion of the highway problem and would not have any of their state sovereignty or state's rights usurped or jeopardized. The idea for such an interstate compact is not new. Precedent was established by the Interstate Oil Compact and the Interstate Compact for Crime Prevention, both of which have worked very successfully. Considerable interest in Congressman Beamer's proposal has been expressed by a number of the States' Governors. It is my hope that the subcommittee will give serious study and consideration to H. J. Res. 221 and act on this bill in the next session of Congress.

In the past I have read articles in the AMA Journal regarding the establishment of medical standards for vision, hearing, equilibrium, and general physical qualifications to be met by applicants for a driver's license. At the present time, I do not believe that it would be practicable to think of the Federal Government establishing these licensing qualifications as this is considered very much a matter within each state's jurisdiction. I do believe, however, that should Congressman Beamer's legislation providing for an Interstate Compact be enacted, it would help the states to adopt uniform licensure requirements. These physical requirements could be drafted by the medical profession based on their scientific knowledge of how certain physical disabilities relate to traffic safety.

Other legislation now pending before the Subcommittee on Traffic Safety, is the "General Motors Vehicle Act of 1957", introduced by Congressman Abraham J. Multer of New York. One section of this bill provides that automobiles shall bear a Certificate of Fitness label. The label would insure that the vehicle had been inspected and found in good working order and in complete accord with all specifications as set forth in all descriptive and advertising matter, as well as that the vehicle had been road-tested and found in good operating condition after such a test. It is my hope that this bill, also, will have the further study of the subcommittee in the next session of Congress.

In addition to the bills which I have mentioned here, in the next session of Congress, the subcommittee expects to continue its investigation and work, and will study specific problems of traffic safety in the general areas of:

1. The human factor in accidents.
2. Vehicle design.
3. Enforcement, and
4. Legislation

One of the most important investigations, which I hope the subcommittee will undertake in the next session of Congress, is that of determining the relationship of alcohol to safe driving. In undertaking

this investigation, the subcommittee will utilize research done by the medical profession with respect to determining the alcohol level in the blood and its correlating effect upon behavior and driving ability.

As many of you know, the Subcommittee on Traffic Safety is quite new, scarcely a year old. In my opinion, however, Congress will continue to keep this special subcommittee until greater highway safety does become a reality. It is our sincere desire to join efforts with you of the medical profession to accomplish this objective as soon as possible so that all persons wherever they may live or travel may enjoy safety on the Nation's highways.

House of Representatives
Washington, D. C.

Most Effective Diuretic

A new drug, recently called "amazing" as a treatment for high blood pressure, has been called the most effective agent now available for combating excessive fluid retention by the body.

The drug is chlorothiazide (Diuril). It is a diuretic, which promotes the elimination of body fluids and salts through the kidneys. Last October two Boston physicians announced that the drug, first thought to be only a diuretic, also has an "amazing" blood pressure lowering effect.

Four articles in the January 11th Journal of the American Medical Association deal with the various uses of the drug.

It is probably the most effective diuretic now available, mainly because of its lack of harmful side effects and its economy and ease of administration by mouth, according to Dr. Ralph V. Ford and associates of Houston, Texas. They said it is effective against all types of fluid retention.

A New York group, headed by Dr. John H. Laragh, found it to work against fluid retention caused by heart failure, cirrhosis of the liver, and nephrosis (a kidney disease) when all other measures had failed.

In discussing the drug's ability to lower blood pressure, Dr. Edward D. Freis and associates, Washington, D.C., said the drug appears to represent an important new development in the treatment of hypertension, but that a longer period of observation is necessary to fully evaluate its effectiveness.

Eight months, the longest reported period the drug has been given, is not long enough to determine the effectiveness of any treatment for hypertension or to rule out the possibility of delayed and as yet unsuspected harmful reactions.

So far chlorothiazide has caused no side effects and patients have not reacted to the drug by needing larger and larger amounts to maintain the same effect. Side effects and tolerance frequently develop with the drugs usually given for high blood pressure.

Dr. Freis gave the drug alone or in combination with other antihypertensive agents to 73 patients. Chlorothiazide "markedly" increased the action of the other drugs and allowed discontinuance or reduction in dosage of the regular agents.

Advantages of chlorothiazide over other agents are that it is given by mouth and has a simple "rule-of-thumb" dosage schedule.

Dr. Frank A. Finnerty and associates, also of Washington, called chlorothiazide "ideal" for the prevention and treatment of toxemia of pregnancy. Toxemia is a general poisoning of the system due to the body's inability to eliminate poisons and waste materials.

Dr. Finnerty gave the drug to 144 pregnant women suffering from hypertension, toxemia, fluid retention, or a combination of these conditions. The drug relieved fluid retention in the early stages, thus preventing toxemia. It also relieved toxemia and reduced the blood pressure of those suffering from hypertension.

The Legal Aspects of Crash Injuries

CHARLES J. FRANKEL, M.D., LL.B.
Charlottesville, Virginia

PERSONAL INJURY litigation from car crashes has increased ten fold in the last fifteen years. Court calendars are so over-crowded with this type of case that plaintiffs in metropolitan areas often have to be subjected to postponements and delays from eighteen to thirty-six months. Witnesses disappear, impoverished plaintiffs settle for inadequate amounts and the whole judicial process becomes subject to disrespect and adverse criticism.

Last year there were more than one million three hundred and fifty thousand deaths and injuries due to automobile crashes. Every death and injury gave rise to a potential personal injury suit. Just as doctors become alerted to an epidemic so do lawyers recognize the potentialities for service and reward from automobile crashes. The National Association of Claimant's Attorneys, six thousand strong, are dedicated to getting for their injured clients the so-called adequate and more adequate award. The insurance groups are likewise dedicated to keeping the awards within the limits they describe as reasonable. The public is required to pay a higher premium for insurance; doctors are forced to spend a great deal of time in court; and some lawyers resort to shady practices in cooperation with equally shady physicians to gain large verdicts in questionable injury cases. The circle is vicious, there is growing disrespect for law and for medicine, and in many areas, impartial medical testimony projects have sprung up in response to a demand for speedier and more adequate justice. How much simpler it would be to cut the litigation sharply by eliminating the causes for our ever increasing crash rate.

Mr. Justice Cardoza, in the historic case of McPherson versus the Buick Motor Company, recognized the duty of care that a manufacturer of a chattel owes to the ultimate consumer or user. Where the design was defective, the courts have been reluctant to impose liability on the manufacturer.

The McPherson case involved a defect in construction. A wheel collapsed, causing injury to the driver and the Buick Motor Company was required to pay a large judgment to the plaintiff, McPherson. The industry apparently took heed of the case and provided rigid inspection processes which have eliminated major defects in the cars before delivery to the consumer or user.

The public has been apathetic to safety in automobile design until recently. When they become aware of the potential for litigation due to faulty design they will find claimant's attorneys eager and ready to serve them. Liability for negligence arises from the creation of unreasonable risk. The manufacturers will not be insulated against liabilities for deficient design. When one courageous legislature will set up a basic safety engineering code for the companies to abide by, then the corporations will become acutely aware of their twin responsibilities; one to the state which can prohibit unsafe vehicles from being sold within that state, and the other to the user and the injured occupants of the vehicle.

In the case of Davlin versus Henry Ford & Son, the court set forth the manufacturers duty as follows: "Its duty was to use reasonable care in employing designs, selecting materials, and making assemblies which would fairly meet any emergency of use which could reasonably be anticipated." "Another important milestone was developed in the case of Carpini versus Pittsburg and Weirton Bus Company. Here, an action was brought against the Bus Company and against General Motors Corporation which had manufactured the bus. The theory of the action against the manufacturer was that it had been negligent in that the design of the braking system used on the bus was dangerously close to the ground and subjected the passengers to the hazard of the failure of the braking system. General Motors cited their experience over the years, with this type of design, showing that despite the millions of miles vehicles of that sort had traveled on highways, no bus accident of the type here involved had been reported. The court stated that this was not conclusive any more than evidence of general practice in an industry is conclusive on whether operations are conducted with due care. A verdict was affirmed for the plaintiff against General Motors."

Evidence is now available which can be presented to the jury on the question of negligence in the inherently unsafe design of passenger automobiles. The Automotive Crash Injury Research Program

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underwritten in part by Cornell University Medical College concluded in its recent annual report that after fifteen years of automobile design, no real improvement has been noted as far as the injury potential is concerned. The data pointedly suggested that the newer model automobiles are increasing the rate of fatalities in injury producing accidents.

Mr. Harold Katz, in an article written for the Harvard Law Review of March 1956, states, "The question whether a manufacturer has discharged his obligation to the public when he makes safety equipment available to the consumer on an optional basis as an accessory would seem to hinge on how necessary such equipment is to safe transportation. Where the accessories are not indispensable to safe and successful operation but are merely conducive to convenience and comfort or to the longevity of the machine, a motorist who fails to install them cannot later complain of injuries suffered due to their absence. A factor which may be important is whether the danger of operation without the equipment in question was brought home to the consumer or, in the case of passengers, whether the hazard was apparent on sight.

"While there is unquestionably some question of risk involved in any form of automobile transportation, it does not follow that the consumer has assumed the risk of those dangers which are not inherent in the situation but which are the direct result of faulty design on the part of the manufacturer. The consumer has never appreciated the relationship between car design and injury potential and cannot be taken to assume any risk of conditions of which he is ignorant."

Some observers have likened the cigarette situation to the automobile. Can a smoker sue the cigarette company if he develops cancer? In the light of our present uncertainty about the relationship between smoking and cancer, it is doubtful that any court would uphold such a suit. Again, cigarettes are not a necessity and a smoker may simply abstain from that habit. Automobiles, on the other hand, are a part of our way of life. We can, with certainty, pinpoint many injuries as being caused solely by deficient design. Litigation against faulty design has been successfully pursued. We expect many more of these cases to appear in litigation unless the industry recognizes the threat.

The medically unfit driver is said to be responsible for between eight to ten per cent of the injuries and fatalities on the highway. I recently treated a middle aged woman who became involved in a wreck following the use of a well known tranquilizing agent. Was her physician liable? I think so. Every physician who prescribes sedatives, tranquilizers, antibiotics, or any drug which temporarily creates a visual or reflex disturbance should warn his patient about driving while under the influence of that drug. Failure to do so may be construed as negligence and might make the physician liable. This is a field in which attorneys are not yet aware of the possibilities. I must advise you that Law Science Institutes throughout the country, one of which I will conduct in Virginia, will bring this information to the attention of lawyers as well as to interested physicians. Certainly a new field of malpractice litigation may well develop unless physicians become more acutely aware of their duties when prescribing special drugs.

CONCLUSION

Faulty design, and included under that broad heading might well be greater horse-power and speed than our highways are able to tolerate, will increasingly become a source of litigation between injured consumers and the automobile manufacturers. Physicians, too, have a duty of care in the careful examination of patients who are being examined particularly for driver's licenses and also when powerful sedatives are prescribed without due warning about the insidious effect on reflexes and ability to handle a motor vehicle under normal and abnormal conditions.

University Hospital
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Police Aspects of Traffic Safety

JOHN J. AGNEW
Washington, D. C.

I AM HONORED to speak of the police aspect of traffic safety. I have always felt that a convention of persons who meet together for a common purpose and with mutual interest in the same problems is a refreshing thing. More than that—it becomes a dynamic, useful opportunity to stand apart from the work that we do and to look at it from a wider angle, so to speak. Here is a welcome chance to disentangle ourselves from routine detail in order to survey the past, come to terms with the present and size up the future.

Several weeks ago my clock radio awakened me with the statement, "Satellite launched into outer space". A few years ago, this statement might have been a startling thing to hear at six o'clock in the morning. Now it is not unusual to hear space research discussed in a matter of fact tone. Of course, even the idea of an automatic clock radio might have been surprising a few years ago. But now, statisticians and researchers throw figures and ideas out of the future at us with such gusto that it's hard to amaze us with anything.

Though not amazed, we come to the hard realization that we're going to have to deal with this future sooner than we think.

Those of us who work with highway safety have been told that 70 million passenger cars alone will be on the nation's streets and highways by 1965. At present we have some 54 million passenger cars and 11 million trucks and busses. Licensed drivers now number over 77 million. This may seem enormous, but next the researchers tell us that every 7½ seconds a baby is born somewhere in the United States, increasing the population of this country every month in number equivalent to a city the size of Providence, Rhode Island. In a year, this amounts to a population increase of 4 million. Think of the drivers we will have on our highways within 20 years.

Traffic officials, highway engineers, enforcement agencies and the automotive industry are all striving to make driving safer. But that's not enough. Our own efforts to follow the rules of safe driving help, but are they enough? Safety experts say no. In these days of bumper-to-bumper traffic, faster tempo and new expressways, we need something else. Commerical drivers, traffic officers and other driving "pros" developed a technique several years ago. When you spend up to eight hours a day coping with traffic you must have a defense against other drivers. It's called defensive driving—and it's paying off for the smart "amateur" drivers who have adopted it too.

The best way to assure your own safety on the highway and the best way to make driving really "pleasure driving" is to practice defensive driving.

When we're behind the wheel of our automobile, we have no control over the actions of other drivers and pedestrians on the street. Nor do we have control over weather or road conditions. But there are certain things we can do, and should do, to assure our safety in traffic. One is to know and obey all traffic laws, signs and signals. Another is to follow all safe driving practices, including driving at safe speeds and extending courtesies to other motorists. Third, we can all keep our automobiles in top operating condition so that we won't have an accident because of a mechanical failure. Finally, we should not drive unless we are physically able to drive in complete safety. If we have been drinking, if we are fatigued or have forgotten our glasses when the law requires that we wear them, we should not drive. But these are only the prerequisites for the defensive driver. They are not enough, in themselves, to keep us out of traffic accidents.

Defensive driving is the technique used to avoid traffic accidents by anticipating all hazardous situations created by the unsafe acts of other drivers and pedestrians and by adverse weather, traffic and road conditions.

The defensive driver drives as if he were literally "under attack". He makes allowances for the other fellow's carelessness and lack of skill or knowledge by assuming the other fellow will make the wrong move every time an emergency arises.

To drive defensively, we must always take the broad view of the traffic, road and weather situations around us. As defensive drivers, we've got to look

JOHN J. AGNEW, *Deputy Chief-in-Charge of Traffic, Metropolitan Police Department, Washington, D. C.*

Presented before the annual meeting of The Medical Society of Virginia, Washington, D. C., October 27-30, 1957.

ahead and around us. We've got to think of what might happen during the next moment and we've got to pace our driving to the changing conditions around us. As defensive drivers, we must assume every other driver and pedestrian has the right-of-way and we must be ready to yield that right-of-way without an argument. We should be ready and willing at all times to forego the few seconds involved to avoid a collision.

By driving defensively, we not only protect ourselves, but we also help to protect other drivers and pedestrians by being alert to accident-producing situations before they materialize. This may sound like a nerve-racking chore, but actually, defensive driving helps us relax in the knowledge that we are ready for any situation which may arise. No ulcers, no swearing at other drivers, no "close shaves", and better yet, no smashed cars or repair bills and no injuries or hospital bills.

When our favorite football team is outweighed by its opponents, we realize the players are at a disadvantage. Yet we frequently see 150 pound human beings disputing the right-of-way with a 3500 pound motor vehicle. It doesn't make sense. But when we drive we should always be alert for wayward pedestrians. Our watchfulness may prevent their mistakes from becoming fatal mistakes.

The reluctance of certain motorists to change their poor driving habits, despite vigorous enforcement on the part of the police, is indicative of what may be the major factor in accident causation. The police position in traffic safety is unique. To the law abiding citizen the presence of a policeman on the street is a symbol of safety. To the indifferent driver the policeman's presence requires temporary restraint. While the policeman is in sight, the speeder feels unsafe—he may be apprehended; passing a red light or a stop sign becomes a risk—a ticket means a fine. In effect the would be violator is restrained only by the policeman's presence. Such drivers recognize only the hazard inherent in apprehension. The hazard of an accident with its resultant death, injury or property damage never enters their mind. Talk to some people you know who have survived collisions in which their friends have been injured or killed. They will tell you, "It wouldn't have happened *if* the other driver had done the right thing." But the time to reflect carefully on how we should behave at the wheel is *before* we begin a motoring trip, and during our traveling, *not afterward*. One person is killed every 13 minutes and one is injured every 2.3 seconds in traffic. Have you noticed how some people smile and joke about narrow escapes they've had in traffic? Have you seen how reckless drivers will sometimes laugh at the concern shown by careful drivers? It's easy for any of us to slip over from our normal good selves and become, for the moment, dangerous personalities at the wheel. We can be bothered by worries about home, our job, or thinking about something far removed when we should be thinking about the possibility of a motorist approaching on the next cross road. We can be suffering from a headache or simply get a sudden impulse to be daring. If we've been drinking our reactions will not be good, but the drinks will make us brave.

Among the causes of death in this country, traffic deaths rank fourth, exceeded only by heart disease, cancer and vascular disease. Anything that causes 40,000 deaths and more than 2,000,000 injuries a year is a serious medical problem.

The medical profession has always stepped into the breach when disease and epidemics strike. Why not develop a serum or antitoxin to be injected into all drivers which will make them safe, sane, cautious and courteous drivers?

Two New A.M.A. Exhibits for '58.

Accidental poisoning of children and weight reduction are the themes of two new exhibits the A.M.A. is offering to medical societies in 1958.

"You Can Reduce" stresses the importance of using will power in the selection of foods. The exhibit illustrates the basic foods that should be eaten every day.

"Poisoning of Children in the Home" pinpoints eight leading offenders, such as aspirin, kerosene, old medicines and household chemicals. Medical society bookings may be arranged through the bureau of exhibits.

Pre-Paid Medical Care. . . .

Edited by
RICHARD J. ACKART, M.D.

Blue Cross Rates

The relatively recent increases in Blue Cross rates in the Norfolk and Roanoke areas and the currently published intent of the Richmond Plan to increase charges to its Subscribers have occasioned a renewed interest on the part of Virginians about the whys and wherefores of the cost of Blue Cross membership. Such interest should be encouraged; the more folks know about the economic aspects of medical care, the more clearly they will comprehend that governmental attempts to regulate medical economics cannot be successful—that the product will be cheapened and its cost not a whit lessened. Patients are nowadays posing questions about the symptom-complex that has been brought about by developmental changes in medical practice with almost the same frequency as they inquire about whatever pathology or deranged physiology that underlies their physical symptoms. Physicians are expected to know the answers; unfortunately physicians are usually expected to know all the answers. To be a physician is to be considered omniscient—it is one of the disadvantages of the profession.

Perhaps the most understandable way a physician might explain the periodic necessity for increased Blue Cross rates is to expound a bit upon the simple statement that during the past ten years hospital operating costs have been increasing approximately 6% per year and will continue to increase at about that rate for at least the next five years. Why? The main reason: Hospitals must keep up with the truly astounding rate of progress which characterizes modern medicine. This requirement, over and above the influence of inflation, has caused hospital operating costs to sky-rocket; successful fulfillment of this requirement has nonetheless caused hospitalization to become the best bargain in today's market. Today more people than ever before go into hospitals. And more people come out.

In order to translate the whole potential of medical progress into accomplishment for the benefit of the patient, it is necessary for the hospital constantly to employ more personnel at higher levels of training and ability. Not many years ago the average hospital could provide its 'round-the-clock services while maintaining a ratio of 1.5 employees per patient; an up-to-date hospital must now employ at least two people for every 24-hour patient day. Computed at the minimum rate of $1.00 an hour, the overhead in salaries carried by the hospital is $16.00 per patient-day. Actually, the figure is often higher.

And medical progress has caused obsolescence to become one of the hospital's significant costs. When industry buys new production machinery it is able to amortize the purchase price over a planned number of years. But diagnostic and therapeutic machines costing anywhere from $1,000 to $10,000 can become obsolete overnight. A hospital cannot afford to neglect replacing them when human lives depend on the changeover—and its percentage of fixed costs balloons even higher. Further, it would be less than realistic to assume that the rapidly expanding limits of knowledge, with all the new discoveries and the apparatus and materials that are its products, will not require even additional costs in the months and years to come.

Indeed, hospital costs will surely continue to rise. The inexorable upward spiral of industrial wages, with which hospital salaries must compete, and the need to provide the patient with the benefits of rapidly advancing developments of medical technology, make increasing hospital costs inevitable. And these factors are beyond the direct control of the hospitals—or of Blue Cross.

Blue Cross provides "service benefits" for hospitalized Subscriber-patients. Whereas conventional insurance coverage pays the policy holder certain stated amounts toward the hospital bill, Blue Cross covers the bill in full, regardless of the amount of the hospital's regular charges, for semi-private room and board, operating and delivery rooms, drugs and medicines, the diagnostic and therapeutic services furnished by the hospital, and other incidental services. Because of the "service" principle, Subscribers receive increased benefits when hospital costs go up. This is not the situation when coverage is by an insurance policy providing fixed dollar indemnity, since the dollar amount remains the same regardless of increases in hospital charges. Blue Cross can give these increased benefits to Subscribers only because

the Plan increases payments to hospitals as their costs of providing services go up.

Obviously, with its rate of outgo constantly increasing hand-in-hand with increasing hospital costs, Blue Cross must periodically adjust its rate of income. No one likes to see Blue Cross rates go up, but there is an incontrovertible justification for increasing Blue Cross rates—the fact that by paying them, whatever they may be, the public benefits from the advances of medical research, provides for adequate financing of its hospitals, and allows doctors to continue their work of saving more lives and restoring health to more people. Nobody makes a profit—but everybody gains.

Cancer Growth

Accumulation of specific metals in the tissues of patients with cancer appears to occur before the cancer develops rather than afterwards, a group of midwestern researchers said recently.

Some researchers have thought high concentrations of trace amounts of metals are due to a secondary storage following the development of cancer.

The present study, however, suggested that the increase occurs prior to the growth of the tumor, because the researchers found an increased amount of metal in the lungs, kidneys, and liver, as well as in the tissues in which the cancer was primary.

Also suggesting a storage prior to the disease is the fact that the cancer tissues themselves have a much smaller amount of these metals than has the surrounding tissue, the researchers said in the December 28 Journal of the American Medical Association.

While they drew no conclusions about whether these high concentrations of metals actually play a role in causing cancer, they did point out that the relationship between metals and cancer needs more study. They suggested that researchers in other geographical areas make similar studies to see how they compare with the Chicago study.

The metals are accumulated from food and air taken into the body.

Some metals and their compounds, even when present in large amounts in the tissues, are known to have no cancer-causing properties, but there are a number with real or suspected carcinogenic properties. These include arsenic, chromium, molybdenum, nickel, cobalt, aluminum, beryllium, cadmium, silver, selenium, zinc, and metals with radioactive properties.

The researchers studied tissues taken from patients with cancer, patients with inflammatory diseases of the lungs, those with other diseases, and from healthy persons. They identified the metals in the lung, liver, kidney, and cancer-site tissues by using a spectrograph. This microscope-like instrument indicates the kind and amount of metal present on the basis of the colors emitted by the metals.

The elements commonly elevated or high in liver, lung, and kidney of patients with cancerous diseases were tin, iron, cadmium, chromium, silver and silicon. In addition, manganese and beryllium were also elevated in the liver, and molybdenum in the kidney.

Chromium, found in elevated amounts in the lung tissue and especially in the liver of patients with cancerous diseases in other organs, is a known cancer-causing agent. Lead, beryllium, and silver are credited with similar properties. This action has not been established with manganese, molybdenum, cadmium, and silicon.

Patients with inflammatory lung diseases had elevated levels of several metals in the lung tissues. It has long been known that a relationship exists between chronic inflammation and tumor-formation. Should elements be selectively stored in inflammatory tissues, they could be a positive factor in the development of a cancerous growth.

The authors, Norbert W. Tietz, Ph.D., Edwin F. Hirsch, M.D., and Benjamin Neyman, Ph.D., conducted the study at the Henry Baird Favill Laboratory, Presbyterian-St. Luke's Hospital, Chicago. Dr. Tietz is now at Reid Memorial Hospital, Richmond, Ind.

Mental Health . . . .

EDNA M. LANTZ

Patients Hospitalized After Mental Hygiene Clinic Service

The question of "How many patients who have had clinic service have been admitted to mental hospitals?" has often been asked. To answer this question a survey was made of ten years of records in the Department of Mental Hygiene and Hospitals on the mental hygiene clinics under its management. This survey was made on a mass basis and has not been edited to all details that could be concerned with a more complete research study. However, some significant factors are evident in the material tabulated.

For the ten years covered in the survey there were 35,388 patients referred to the Clinics; 30,465 first referrals and 4,923 reopened cases. Of the total referrals for age on admission, 23,402 were under 18 years of age or 66.12% and 11,986 over 18 or 33.18%. As the majority of the patients admitted were under 18 years of age, it might be well to expect that in later years some of these may enter hospitals. This report, for those admitted to the hospitals, is based on the age at referral.

Of the 23,402 patients under 18, 0.6% had been hospitalized before admission to the clinics, 3.2% hospitalized after a clinic admission and 0.1% had both before and after records, making a total of 3.3% admitted to mental or mentally deficient hospitals after clinic service. This totalled 876 patients or 1 of about 30 patients. In the diagnostic distribution nearly half (48.33%) were mentally deficient, 15.99% were other services (other than treatment or diagnostic).

Other diagnostic distribution was 7.09% brain syndromes, 7.10% psychotic, 2.85% psychoneurosis, 6.45% personality disorders and 11.74% transient situational disorders (mal-adjustment childhood and adolescence). There were also a small per cent, 0.53, on which the clinics reported there was "no mental disorder". With approximately half of those under 18 entering hospitals diagnosed as mentally deficient, this left 402 or about 1.7% of the referrals in this group admitted to mental hospitals with other diagnoses or services.

For those over 18 years of age, the percentage runs much higher. There were 1,123 of the 11,986 referrals admitted to mental hospitals or 9.4%. About 1 out of 10 (7.7% after and 1.7% before and after clinic service). Those that went to clinics after hospitalization were 5.1%.

The diagnostic distribution has a much different picture than those under 18 years of age, with 63.16% in the group that would not be expected to benefit too much from clinic service (11.76% brain syndromes, 34.38% psychotic and 17.02% psychoneurosis). The other 36.84% was made up of 11.59% personality disorders, 0.99% transient situational disorders, 7.93% mentally deficient, 1.17% no mental disorder and 15.24% other services.

Prior to 1952 the cards were not coded as to what facility the patients were admitted, state or private. Since that date 307 patients were admitted to clinics after hospitalization, with 31.3% of these being on trial visit at the time admitted to the clinic. There were 870 patients admitted to state hospitals and 171 to other facilities after clinic service. This was 4.5% and 0.52%, respectively. The total for this period was 5.02% admitted to hospitals after clinic service.

The grand total admitted to hospitals after clinic service was 5.4%. The range was from 6.2% of 1948 referrals to 4.3% of 1956 referrals. 1957 was 4.9%.

We have no knowledge of other studies or surveys made as to the rate of patients to those having clinic service entering mental hospitals, therefore, have no comparative information. It is felt that this survey, though only a short period when the younger age is considered, shows some significant factors. The probability that most of those that entered the hospitals would have done so without clinic service and in some cases they may have been encouraged to have hospital treatment.

As there is no information as to the adjustment, etc., of the approximately 85% (about 10% still under treatment) of the patients that have not been admitted to hospitals, a follow-up study would give valuable information as to the results of clinic services.

EDNA M. LANTZ, *Statistician, Department of Mental Hygiene and Hospitals.*

This report was made at the Second Annual Conference of the Department of Mental Hygiene and Hospitals in Roanoke, Virginia, December, 1957. It is planned to develop this base material into a more detailed study.

Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Health of the Migrant Laborer

Since that season is approaching when there will be an influx of migrant laborers, particularly on the Eastern Shore, it may be well to review those services of the State Health Department available to these workers. These families, for they usually travel as such with all of their belongings, are primarily Negroes from Florida and Alabama, with an increasing number of Puerto Ricans each year, and a few Mexicans. This group, because of its socio-economic status, requires more leadership and assistance than the usual agricultural worker in this area. They have little confidence in white doctors and for that reason will not report sickness until frightened by the patient's failure to improve. For the same reason they will make little or no effort to find out what medical facilities are available to them, either those of the local heath department, the private physician or hospital. Because of this lack of information, and the fact that they are on the road a good portion of the year, the usual immunizations given pre-school children are usually lacking. They are particularly subject to intestinal diseases and, even when carefully instructed in camp sanitation, will fail to take the simplest sanitation precautions. For these reasons, the local community where the migrant laborer works will have to realize that the migrant is necessary to the community's economic well-being. With this in mind, they must accept the migrant laborer himself and his family. They may not accept him as one of their own, but they must assist in seeing that those services available to the permanent resident are offered to the migrant when possible, and equally important, that he or his family knows where these services can be obtained.

As each group of migrant laborers enters Virginia, they are "processed" at the Little Creek Information Station, and at this time health information is passed on to the worker. All growers should be well-informed on the health departments and private physicians in their area. A booklet, "Health Services in Major Migrant Work Areas", has been published by the U. S. Department of Health, Education and Welfare, listing the health departments and hospitals in all of the East Coast Migrant States, and including addresses and telephone numbers. This booklet is invaluable to those persons who deal with the migrant laborer in any way.

Every migrant laborer and his family are offered all of the health department facilities available to local residents, with the exception of hospitalization through State and Local Hospitalization funds. However, they can be hospitalized at State expense for active, infectious tuberculosis. Outside of hospitalization, which is not made available because of the one-year resident requirement, all clinics, such as Prenatal, Postpartum, Well Baby, Pre-school, Venereal Disease, Tuberculosis, Crippled Children, Orthopedic, as well as immunizations and examinations, are available. Sanitation assistance is available upon request, although the migrant laborer appears to prefer to "camp" rather than utilize quarters furnished, regardless of the condition of quarters or toilets. It is increasingly evident that whatever is to be done for the migrant must be done by the local community, as the migrant seems to show little if any initiative and he is not particularly receptive to the usual methods of education used by the health department in working with the general public. One of the best means of helping the migrant is through the establishment of day camps and school systems.

There has been much discussion on this thought, most of it directed to State and Federal aid in financing these day camps for children and even to assisting the schools. In Virginia last year, approximately 150 children attended school for varying periods of time, at no expense to the migrant. It is felt, in all of the East Coast States using migrant labor, that day camps for children not only relieve the family of duty of caring for the child, but benefit the child, give the family more peace of mind and usually allow an additional member of the family to work and thus increase the family income. New York has done away with its one-year residence requirement and for the year 1956 spent a total of $99,640.00 for migrant care, which included $77,596.00 for hospitalization and $12,012.00 for medical care. Subtracting hospitalization and medical care from this total would leave a very small total

for all other aid to migrants. The additional costs for day camps and medical service at schools, particularly school or camp nursing, would be minimal. It will take many years to make the migrant worker realize what is being done to help him and his family, but the result in better workers, bigger harvests and congenial visitors to the State of Virginia should be worth the effort.

MONTHLY REPORT OF BUREAU OF COMMUNICABLE DISEASE CONTROL

	Dec. 1957	Dec. 1956	Jan.-Dec. 1957	Jan.-Dec. 1956
Brucellosis	0	1	22	32
Diphtheria	2	2	22	32
Hepatitis	16	33	426	484
Measles	213	285	5226	23998
Meningococcal Infections	15	8	86	93
Meningitis (Other)	14	15	418	163
Poliomyelitis	3	17	105	237
Rabies (In Animals)	16	22	318	299
Rocky Mt. Spotted Fever	0	1	31	53
Streptococcal Infections	454	469	6848	5789
Tularemia	5	3	36	23
Typhoid Fever	0	2	42	59

Correspondence . . . .

Poison Information Center.

To The Editor:

Are the physicians of Virginia aware of the newly formed Poison Information Center? We feel that it can be of great value to them. We are taking this opportunity to remind them of its existence and the facts that they need to know about it. The Center is located in Medical College of Virginia in Richmond and until such time as other centers are organized, this one will serve the physicians of the entire State. The Center is manned by a medical staff.

Information is available twenty-four hours a day. Current files are kept on the harmful constituents of various household and chemical products on the market. Data on the effective treatment and management of persons suffering from poisoning is also on file. This information is readily available to a physician if he phones Milton 4-9851 at Richmond, and asks for the Poison Information Center.

We, of Monacan Junior Woman's Club, have the privilege of working closely with the Center. Our members enjoy a very comforting feeling in knowing that our physicians have this source of information available to them. We ask that the physicians of Virginia take advantage of the services the Center offers them.

Of course, we are interested not only in preventing deaths from poisoning, but to "put the horse before the cart", we are interested in preventing the poisoning itself.

To help us accomplish this mountainous task, the physician might take a small amount of his time to give a word of warning to his patients about the potential dangers of the medications that he prescribes and of the simplest household products.

We, of Monacan Junior Woman's Club, thank you for your interest in reading this letter.

ANNE C. DAVIS (MRS. CARY W.)
Chairman, Safety Committee

7709 Stuart Hall Road
Richmond 26, Virginia

Miscellaneous . . . .

"Principles of Medical Ethics"

Medical ethics is a subject of the utmost importance and every physician should, in these changing and uncertain times, understand fully the principles which guide and, to a great extent, determine his relationships with both the public and the profession.

The Ethics Committee of The Medical Society of Virginia has arranged for the "Principles of Medical Ethics" to be reviewed section by section—accompanied by a detailed explanation from the Judicial Council of the American Medical Association. The opinions of the Council will make interesting reading and will do much to dispel any doubts which might exist concerning the interpretation of the various sections.

A review of the first section of the "Principles of Medical Ethics" follows and subsequent issues of the Monthly will treat the remaining sections in sequence.

PREAMBLE

These principles are intended to aid physicians individually and collectively in maintaining a high level of ethical conduct. They are not laws but standards by which a physician may determine the propriety of his conduct in his relationship with patients, with colleagues, with members of allied professions, and with the public.

TRADITIONAL CONCEPTS INCLUDED WITHIN THE PREAMBLE

The Judicial Council is of the opinion that the PREAMBLE of the Principles of Medical Ethics, 1957, embraces the spirit and intent of several sections of the 1955 edition of the Principles, including: the Preamble; Chapter I, Section 3 (Groups and Clinics); and Chapter VIII, Section 3 (Pharmacists). These sections are reproduced below as guides in the interpretation of the PREAMBLE.

Preamble, 1955 edition of the Principles of Medical Ethics:

> These principles are intended to serve the physician as a guide to ethical conduct as he strives to accomplish his prime purpose of serving the common good and improving the health of mankind. They provide a sound basis for solution of many of the problems which arise in his relationship with patients, with other physicians, and with the public. They are not immutable laws to govern the physician, for the ethical practitioner needs no such laws; rather they are standards by which he may determine the propriety of his own conduct. Undoubtedly, interpretation of these Principles by an appropriate authority will be required at times. As a rule, however, the physician who is capable, honest, decent, courteous, vigilant, and an observer of the Golden Rule, and who conducts his affairs in the light of his own conscientious interpretation of these Principles will find no difficulty in the discharge of his professional obligations.

Chapter I, Section 3 (Groups and Clinics) 1955 edition of the Principles of Medical Ethics:

> The ethical principles actuating and governing a group or clinic are exactly the same as those applicable to the individual. As a group or clinic is composed of individual physicians, each of whom, whether employer, employee or partner, is subject to the principles of ethics herein elaborated, the uniting into a business or professional organization does not relieve them either individually or as a group from the obligation they assume when entering the profession.

Chapter VIII, Section 3 (Pharmacists) 1955 edition of the Principles of Medical Ethics:

> Physicians should recognize and promote the practice of pharmacy as a profession and should recognize the cooperation of the pharmacist in education of the public concerning the practice of ethical and scientific medicine.

OPINIONS AND REPORTS OF THE JUDICIAL COUNCIL

The following are excerpts from Reports and Opinions of the Judicial Council which are applicable in interpreting the PREAMBLE.

Unethical Conduct

The Council does not believe it is appropriate to define terms not used in the Principles which connote unethical conduct because neither definition nor description determines the ethical nature of conduct. (*1954 Report*)

"Ghost Surgery"

The Judicial Council in its 1954 Annual Report stated that it does not believe it appropriate to define expressions not found in the Principles themselves which, in popular usage, connote ethical or unethical conduct. The Council points out that the Principles themselves are the criteria by which the ethical nature of professional conduct is determined. Whenever it beomes necessary to evaluate the ethical quality of any particular act, reference must be made to the Principles themselves. (*JAMA, Mar. 30, 1957*)

Cooperative Diagnostic Laboratories

Concerns known as "cooperative diagnostic laboratories" have been organized in which practicing physicians participate as "members". Information indicates that organization is effected in such a manner that control will lie in the hands of the promoters and directors of these schemes and that practicing physicians are then expected to refer work to the laboratories operated by the concern. As a consideration for such referrals, the physician members receive from the laboratories compensation varying with the amount of work referred. The Judicial Council is of the opinion that schemes of this kind are unethical and directly opposed to the interest of scientific medicine and of the state. (1930 Report)

Principles Applicable to All

There is but one code of ethics for all, be they group, clinic or individual and be they great and prominent or small and unknown. (1934 Report)

Diagnostic Clinic

The name "clinic", because of its association with the earlier uses of the term, implies a very superior service by very superior individuals. This is frequently not the case. If the American Medical Association is to define a diagnostic clinic it must be done in a way that will represent the efficiency that modern scientific progress has made possible to the doctor of medicine who has kept abreast of that progress, and the idealism or ethical principles that for hundreds of years have been our most cherished heritage as a profession. The Council submits the following as its opinion of a proper definition of a diagnostic clinic:

(1) A diagnostic clinic is an organization of physicians whose sole work in the clinic is to make or supervise diagnostic examinations of patients referred to the clinic by doctors of medicine, or to collaborate in general diagnostic surveys.

(2) The reports of the diagnostic clinic on examinations and tests are made only to the referring physician unless he requests that the case and the recommendations for treatment be discussed with the patient as a part of a professional consultation at which the relationship of the results of the diagnostic studies to the general condition of the patient is open for discussion. In such case, discussion is only by a member of the staff.

(3) The staff of the diagnostic clinic should include representatives from all the specialties that are of recognized diagnostic usefulness. Every clinical examination, laboratory test or X-ray procedure is made by a physician who specializes in that field or under his supervision. They exercise fully their abilities.

(4) The control of the clinic must be vested in one or more members of the professional staff. Any profits are to be apportioned only to the members of the staff actually engaged in the work of the clinic. There must be no dividends, bonuses or salaries paid any individual except for services rendered.

(5) The clinic must be governed in its activities by the same ethical principles as apply to any individual member of the American Medical Association.

It is recognized that under this definition only in cities large enough to support the various specialists needed can a diagnostic clinic be established or maintained. Unless the specialists are available it is not a diagnostic clinic worthy of the name. (*1939 Report*)

Division of Income by Members of a Group

It is important to bear in mind that the division of income given to members of a group practicing jointly or in partnership must be in proportion to the value of the services contributed by each individual participant. To divided the income of the group equally after deducting expenses would be in fact the division of fees, which is not only unethical but in violation of the laws of some states. (*1946 Report*)

Principles Apply to Members of Group or Partnership

The ethical principles controlling group practice are the same as for the individual. Since the principles of ethics for private practice absolutely forbids the splitting of fees under any and all circum-

stances the same rule applies to group practice and the group formed must be a real partnership in which the total income is divided not equally but according to the individual income earned by the member. (*1947 Report*)

"Clinic"

The Judicial Council has stated before that it does not define terms that may connote ethical or unethical conduct. Nor does it believe it to be within its province to attempt to approve or disapprove, encourage or discourage particular forms of medical practice by definition. The Principles of Medical Ethics are themselves the criteria by which the ethical nature of professional conduct is determined. In connection with any definition of the word "clinic," it should be clear that regardless of how clinic is defined each physician-member of the clinic must act, in his relations with his patients and his colleagues, in accord with all the Principles of Medical Ethics. No physician member of a clinic may permit the clinic to do that which he may not do. Each physician must observe all the Principles of Medical Ethics.

Under the ethical principles of medicine no use may properly be made of the word clinic that would mislead or deceive the public, or would tend to be a solicitation of patients to the particular group of physicians holding themselves out as a "clinic". (*JAMA, March 30, 1957*)

How Do You Feel?

Dr. Charles Frankel of the University of Virginia Hospital recently made an interesting statement which he feels might be the opening of a new field in litigation. Dr. Frankel feels failure by a physician to warn a patient for whom he has prescribed certain drugs which "create a visual or reflex disturbance" might be construed as legal liability in the event the patient is involved in a traffic crash resulting from the temporary physical defect.

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It makes sense to us, as many drivers involved in crashes and many drinking drivers blame the taking of a drug for their trouble. While we believe most physicians are careful to so advise their patients, it might be well to settle the fact that this has been done by writing a warning on the prescription in order that a plea of ignorance will be invalid.

In this connection, courts have ruled that a driver who operates when suffering from an illness he knows can suddenly incapacitate him or while influenced by properly administered drugs which he knows can do the same thing is legally liable for any damage he might cause.

In other words, one who knows he is subject to a disease which causes sudden fainting spells which an "act of God" or other causes beyond his control, cannot immediately be predicted, although he might be otherwise capable, should not drive. If he does and comes to grief by reason of such an attack, he cannot successfully plead the crash stemmed from He drove in full control of his mind and body but knowing at any second he could be suddenly incapacitated.

The same is true for drowsiness. Normal sleep doesn't come upon one as if he had been subjected to a shot of sodium pentothal. It gives warning in a feeling of sleepiness which begins to set in well before the subject succumbs to it. Therefore, as inconvenent as it might be, he is legally bound to stop driving until he is alert again or to relinquish the wheel to somecne else. He knows his drowsiness can well result in his falling asleep and that asleep he is almost certain to wreck his car and has an excellent chance of running into another vehicle. Thus also have the courts ruled.

While we are on the subject, we might as well echo the feelings of many physicians now that it is incumbent upon them that they warn patients they feel are not physically capable of driving properly not to do so. Such a situation might arise from permanent defects, advancing age, nervous conditions and other causes. Of course, the physician could incur no legal liability here in not doing so.

Woman's Auxiliary . . . .

President—Mrs. John R. St. George, Portsmouth
President-Elect—Mrs. Charles A. Easley, Danville
Vice-Presidents—Mrs. Girard Thompson, Chatham
Mrs. George Brooks, Richmond
Mrs. Robert Detwiler, Arlington
Recording Secretary—Mrs. James Grinels, Richmond
Corresponding Secretary—Mrs. Howard Kruger, Norfolk
Treasurer—Mrs. Wyndham B. Blanton, Jr., Richmond
Publication Chairman—Mrs. Paul Pearson, Warsaw

Committee Chairmen.

The following Committee Chairmen will serve the Woman's Auxiliary for this year:

Organization and Membership—Mrs. Charles Easley, Danville

Finance—Mrs. Kalford Howard, Portsmouth

Program—Mrs. Girard Thompson, Chatham

Legislation—Mrs. Thomas Hunnicutt, Jr., Newport News

Public Relations—Mrs. Arthur Taylor, Suffolk

Revisions—Mrs. Malcolm Harris, West Point

Publications—Mrs. Paul C. Pearson, Warsaw

Bulletin—Mrs. Louis A. Houff, Clifton Forge

Today's Health—Mrs. Robert Keeling, South Hill

Recruitment—Mrs. Herman Farber, Petersburg

Mental Health—Mrs. Clyde Bedsaul, Floyd

Safety—Mrs. Custis Coleman, Richmond

Civil Defense—Mrs. Frank DeLaura, Norfolk

Members-at-Large—Mrs. Ira Hancock, Creeds

Cancer Control—Mrs. N. M. Nipes, Harrisonburg

Leigh-Hodges-Wright Memorial Fund—Mrs. W. C. Barr, Richmond

Philanthropic Fund—Mrs. Rufus Brittain, Tazewell

AMEF—Mrs. James Moss, Alexandria

Student Loan Fund—Mrs. J. M. Booker, Lottsburg

Research and Romance of Medicine—Mrs. Mallory Andrews, Norfolk

Councilor to Southern—Mrs. Walter A. Porter, Hillsville

Nominating—Mrs. A. B. Gravatt, Jr., Kilmarnock

Parliamentarian—Mrs. Richard Reynolds, Norfolk

Historian—Mrs. Hawes Campbell, Richmond

Directors—Mrs. Lee S. Liggan, Irvington
Mrs. Maynard Emlaw, Richmond
Mrs. J. L. DeCormis, Accomac

Advisory Council—Dr. Cullen M. McCoy, Norfolk
Dr. Fletcher J. Wright, Petersburg
Dr. Reverdy Jones, Roanoke

Portsmouth.

This Auxiliary was officially organized on September 6th at a general meeting and lunechon at the Elizabeth Manor Country Club. Officers installed were: President, Mrs. L. E. Mayo; president-elect, Mrs. Byron Eberly; vice-president, Mrs. H. M. Kunkle; recording secretary, Mrs. Joseph MacPhail; corresponding secretary, Mrs. John Hollowell; treasurer, Mrs. James Morgan; historian, Mrs. Paul Robinett; and parliamentarian. Mrs. K. W. Howard. The advisory committee from the Portsmouth Academy of Medicine is Dr. W. B. Pope, Jr., Chairman; Dr. M. H. Hood; and Dr. A. P. Long.

The first Board meeting was held on November 26th. Activities for the year were discussed and it was recommended that we would have: a general meeting and luncheon in January; a Doctor's Day dinner and dance; and a State President's luncheon in the spring.

Gloria Tyler Robertson
Publicity Chairman

Mrs. K. W. Howard,

Portsmouth, was elected first vice president of the Woman's Auxiliary to the Southern Medical Association at its meeting in Miami. Last year she served as treasurer of the Auxiliary.

Publicity.

To our contributors to this issue of the "Auxiliary Page", our thanks for your prompt reply to our request for news. May we again stress the importance of your copy of the activities of your Auxiliary being sent to the Publications Chairman the first of each month following the meeting.

Mrs. Paul Pearson
Publications Chairman

President's Message . . . .

TO THOSE who read it each month, the Virginia Medical Monthly is obviously a fine example of its type of publication. The more casual observer of it, who knows little of what goes into such an effort, should realize what it takes to produce, month after month, a journal that ranks with the best in the country.

Our able Editor, Dr. Harry Warthen, Jr., and his Editorial Board must carry on the business of the magazine, answering to The Medical Society of Virginia for its popularity, costs and profits, and general policies. Experience greatly helps in this area and little change was made in this Board this year.

E. Spencer Watkins, our sharp eyed, efficient Managing Editor has the tough job of collaring (and collecting from) advertisers, checking their ads, deciding what medical articles shall go in each month, reading proof, (and making necessary corrections), getting all data to the Printer and back from the Printer and back to the Printer again, determining what shall go where and why, keeping track of new subscriptions, old subscriptions and overdue subscriptions. The other people working in our Headquarters at Richmond aid her in this work.

Because of the time it takes to accomplish these tasks, it is difficult to use our Monthly as a means of disseminating information that needs to be acted on quickly. The material for any given issue must go in to the printer at least one month ahead of actual publication, and sometimes it takes even longer. We have cast about for some means of using the Monthly to alert our members concerning National and State legislative proposals especially, or other events and problems that suddenly appear on the scene. It would appear that the section known as Current Currents is the best means of accomplishing this. The bright yellow page is made up separately and inserted into the magazine just before binding and mailing so that it reaches the reader with still-fresh news of importance. It is almost the "newspaper" part of our magazine.

I should like to suggest that all members read this section as soon as possible after the Monthly is delivered to you. We hope to keep you up to date in this way, with pertinent, easy to read data. In return, we ask you to let your legislators and/or State Society officers know your feelings on the issues involved.

H C Bates, Jr.

President

Current Currents

PHYSICIANS are urged to take another look at the Forand Bill, H. R. 9467, which poses the greatest threat ever to the free practice of medicine. This Bill would provide hospital and surgical benefits for persons who are receiving, or are eligible for, social security retirement and survivorship payments.

Dr. David B. Allman, President of the AMA, has called for local action campaigns to enlist full community support in opposition to the Bill. According to Dr. Allman, the Forand Bill is "cut from the same cloth" as national compulsory health insurance and "emanates from the same minds".

The Forand Bill contains four provisions of particular interest to physicians. They are: (1) up to 60 days per year of hospital care along with nursing home care and surgical service—nursing care up to 120 days per year minus the number of days of hospitalization; (2) maximum rates for retired persons and survivors would be increased to $305 monthly from the present $200 monthly maximum; (3) rates of taxation on both employee and employer would progressively increase until a combined total of 9½ per cent were reached in 1975; (4) taxable income would be increased to $6,000 from the present rate of $4,200.

ATTENTION is also called to the Kean Bill, H. R. 8883, which, among other things, provides for compulsory coverage of self-employed doctors of medicine under OASI.

THE MEDICARE PROGRAM, in its first year of operation, has paid a total of $43 million in claims. The government has paid 300,000 physicians' bills amounting to $22 million and over 200,000 hospital bills totaling $21 million. During this first year, approximately 40 per cent of Medicare patients were maternity cases. The Air Force accounted for 41 per cent of the total claims, the Navy 32 per cent, the Army 25 per cent and the U. S. Public Health Service 2 per cent.

DR. GEORGE F. LULL is now Assistant to the President of the AMA. The new General Manager is Dr. F. J. L. Blasingame who has assumed responsibility for the over-all administration of the Association. In his new job, Dr. Lull will relieve the President of many of the burdens of that office in addition to serving as Secretary of the Association. He will act as a special ambassador of the medical profession in cities and towns throughout the country.

WOMEN IN THE UNITED STATES today live considerably longer, on the average, than men. According to a report issued by the Health Information Foundation, the life expectancy of females at birth was, in 1956, over six years higher. The better record of women results from the more rapid decline of their mortality since 1900, rather than from any increase in the death rate among men.

WHERE DOES AMA MONEY GO? This question was recently answered by Dr. George Lull, who told a Miami audience how the AMA spends its annual income of approximately $10 million. The AMA receives most of its revenue from dues and subscriptions totaling $5,192,000. Advertising brings in another $4 million. Some expenses, reported to the nearest thousand, are: public relations, $400,000; Council on Medical Education and Hospitals, $376,000; Bureau of Health Education, $296,000; Washington Office, $227,000; Council on Medical Service, $206,000; Membership Records, $202,000; Bureau of Medical Economics Research, $173,000; Biographical Records, $155,000; American Medical Education Foundation Overhead, $119,000; Law Department, $111,000; Bureau of Exhibits, $109,000; Council on Drugs, $99,000; Council on Industrial Health, $76,000; Council on Rural Health, $68,000; Council on Medical Physics, $61,000; Council on Foods and Nutrition, $56,000.

THE U. S. CHAMBER OF COMMERCE deserves a vote of thanks for the manner in which it reacted to a resolution introduced during a recent meeting of the American Municipal Association, a federation of state municipal leagues. The resolution advocated compulsory health insurance.

The U. S. Chamber immediately contacted all state chambers, urging them to wire the association and express strong opposition to such a proposal. The Chamber has informed the AMA that the response and support from state offices were excellent. The American Municipal Association shelved the resolution and will appoint a committee to study the problem with instructions to report back at the next meeting in December, 1958.

TWO NEW TEN-MINUTE FILMS will be available soon from the American Medical Association. The films, particularly suited for showing to school and church groups, are entitled "The Silent Killer" and "Out of Step". The former deals with the dangers of carbon monoxide poisoning from gasoline exhausts and the latter tells the dramatic story of an accident which occurs to a child whose father has always ridiculed safety measures, first-aid and other so-called "boy scout" ideas. The Scouts, of course, come to the rescue!

The films are available on loan to medical societies and can be secured from the AMA Bureau of Health Education. The only charge is for return shipping.

DID YOU KNOW that the distribution of narcotics is a function of the Bureau of Narcotics of the Treasury Department and has nothing to do with the Food and Drug Administration, except in the exchange of information.

Regulations having to do with advertising drugs on radio, television and in newspapers is primarily a function of the Federal Trade Commission and not of the Food and Drug Administration.

Editorial....

Virginia's Medical Education

VIRGINIA can justifiably be proud of its two medical schools, each of which has served the State well over many years, and each of which enjoys a fine national reputation. What is not widely appreciated, however, is the fact that our schools are operating under severe financial handicaps, which must be alleviated if they are to maintain their present status, let alone improve it.

We have all heard through the National Fund for Medical Education, the American Medical Education Foundation, and the recent speech by President Eisenhower of the nationwide plight of Medical Education, but let us look at the relative position of Virginia in the national picture. The figures to be quoted refer specifically to the University of Virginia, but the Medical College of Virginia finds itself in a similar situation.

There are 22 medical schools, public and private, of approximately the same size as the University with which it may fairly be compared. Of these, 15 have larger budgets for faculty salaries. Only 6 have smaller. There are 10 other State schools of comparable size, 9 of which have higher budgets for salaries and all 10 of which enjoy greater total state support than we. Furthermore, the magnitude of the discrepancies is very great, the *average* figure for total state support of the 10 schools being over *twice* the amount appropriated for the Medical School at the University by our General Assembly. It must be apparent that if our schools are to survive, substantial relief is urgently needed.

Physicians in the State will recognize this situation as a truly compelling reason for urging appropriation of the funds necessary for the modest increases in operating budget requested by our medical schools in the next biennium. Their help and support will be deeply appreciated.

THOMAS H. HUNTER, M.D.
Dean, School of Medicine,
University of Virginia

Postscript to the Barber-Surgeon's Sign

THE JULY ISSUE of the Virginia Medical Monthly contained an item concerning an early seventeenth century barber-surgeon's signboard which was being reproduced in England for display in the Medical Exhibit of the Jamestown Festival. Through the good services of Mr. Harold Midgely of Richmond, England, the firm of Richard Dendy and Associates of London prepared a facsimile of this sign which arrived in mid-summer and proved to be the central attraction in the Medical Exhibit which was held in the Richmond Academy of Medicine. This board will be formally presented to the Academy by the Life Insurance Company of Virginia at the Section on the History of Medicine Meeting in February.

At the conclusion of the exhibit several members of the Academy felt that a second copy should be made from the same mould and presented to the Royal College of Surgeons inasmuch as the original sign had belonged to this Society and was destroyed when the museum was burned during an air raid in 1940. When Mr. Dendy was written concerning this, he replied that he had "stolen a march" on the Richmond Academy of Medicine by already having had a copy made which he was going to give to the Royal College of Surgeons.



About this time the Medical Curator of the Smithsonian Institution, who had seen the editorial about the sign in the Virginia Medical Monthly, inquired as to how he could obtain a copy for the Smithsonian. He was referred to Richard Dendy and Associates and the London firm was advised by the Richmond Academy of Medicine that a copy could be made for the Smithsonian Institution upon request.

The following reply was received:

"The Smithsonian Institution has already written me regarding a copy of the board and in view of the pleasure I have had over the years from the National Geographic Magazine, with which I expect you know they are closely associated, I hope they will accept one as a gift; it will also be a very small personal 'thank you' to you good neighbors for all the kindly acts you have done for us since we joined together during the last war. I hope this does not sound too pompous, it is quite genuine . . . Richard Dendy."

Had this been the only benefit obtained, and there were many others, this unexpected act of international good-will would have made all the work expended in preparing the Jamestown Medical Exhibit eminently worthwhile.

H. J. W.

Society Proceedings . . . .

Williamsburg-James City Medical Society.

Dr. Baxter I. Bell, Sr., recently chosen Virginia general practitioner of the year, was honored by this Society at a dinner meeting on December 11th. He has been a Williamsburg physician for thirty-two years.

Dr. Hiram Davis, State Commissioner of Mental Hygiene and Hospitals reviewed his department's budget requests for the 1958-59 biennium.

Officers for 1958 were elected as follows: President, Dr. Linwood Farley; vice-president, Dr. Janet Kimbrough; secretary, Dr. B. E. Robuck; and treasurer, Dr. John Martin.

Warwick-Newport News Medical Society.

At the meeting of this Society on November 12th, the following officers were elected for 1958: President, Dr. I. F. Nesbitt; vice-president, Dr. S. H. Mirmelstein; and secretary-treasurer, Dr. J. Q. Hatten. Dr. Barnes Gillespie was named chairman of the Board of Censors with Drs. E. L. Alexander and O. W. Booth as the other members.

Fredericksburg Medical Society.

Dr. T. S. Lloyd, Jr., has been elected president of this Society for 1958. Dr. C. P. Barnett is vice-president and Dr. W. D. Liddle secretary-treasurer.

Fourth District Medical Society.

Dr. Robert D. Keeling, South Hill, has been installed as president of this Society, succeeding Dr. James A. Thweatt, Petersburg. Other officers are: vice-presidents, Dr. William Grossman, Petersburg, and Dr. Earl M. Bane, Lawrenceville; secretary-treasurer, Dr. C. W. Vick, Jr., Petersburg, and chairman of the Steering Committee, Dr. Ray Moore, Jr., Farmville.

Arlington County Medical Society.

At the meeting of this Society on December 18th, Dr. Thomas A. McGavin was installed as president, succeeding Dr. K. C. Latven. Dr. Stephen J. Sheehy was named president-elect; Dr. Robert L. Norment, vice-president; Dr. Bertram C. Snyder, secretary; and Dr. Michael A. Puzak, treasurer. Dr. Latven becomes member-at-large of the Executive Committee.

Virginia Society of Ophthalmology and Otolaryngology.

The annual meeting of this Society was held in Roanoke, December 5-7, under the presidency of Dr. L. Benjamin Sheppard, Richmond. Dr. Emanuel Wallerstein, Richmond, was installed as president and Dr. Calvin T. Burton, Roanoke, was named president-elect. Dr. Thomas N. Winn, Covington, was elected vice-president and Dr. Maynard P. Smith, Richmond, secretary-treasurer. Members of the Executive Committee are Drs. G. Slaughter, Fitz-Hugh, Charlottesville; Howard L. Mitchell, Lexington; L. Benjamin Sheppard, Richmond; Albert Gillespie, Staunton; George N. Thrift, Richmond; Albert E. Long, Alexandria; and Peter A. Wallenborn, Roanoke.

News Notes . . . .

New Members.

The following new members have been admitted into The Medical Society of Virginia since the list published in the January issue of the Monthly:

Thomas Marshall Arrington, M.D., Richmond
Clifford Henry Fox, M.D., Charlottesville
Ronald Blythe Harris, M.D., Roanoke
Charles Fenton Hunt, M.D., Charlottesville
Robert Henry Jordan, M.D., Richmond
Leon Alphonse Martel, Jr., M.D., Falls Church
Eugene Arthur Mason, M.D., Norfolk
Moses Leroy Nafzinger, M.D., Woodbridge
William John Reardon, M.D., Falls Church
Gilbert Fletcher Rieman, M.D., Norfolk
James Howard Smith, M.D., Petersburg
Leslie Taylor, M.D., Colonial Heights

Hospital Staff Appointments.

Dr. G. Edward Calvert has been reelected president of the staffs of the Marshall Lodge and Guggenheimer Memorial Hospitals in Lynchburg. Dr. E. L. Stoll was named vice-president and Dr. Claire Whitmore, secretary. Drs. John Wyatt Davis, Jr., Richard Hawkins, L. M. Howard, J. B. Jones, W. F. Thornton, and E. T. Owen were elected to the executive board.

Dr. Randolph T. Shields has been named president of the King's Daughters' Hospital Staff in Staunton. Dr. William E. Harman was elected vice-president, Dr. Bruce L. Baer, secretary-treasurer, and Dr. H. McKelden Smith member-at-large of the executive committee.

Dr. Adrian J. Delaney is the new president of the Alexandria Hospital Medical Staff. Dr. C. A. Hudson was named president-elect and Dr. Jean D. Lockhart secretary-treasurer. Drs. A. S. Williams and Christopher Murphy, Jr., was elected to two-year terms on the executive committee.

Dr. H. Lee Earnhardt has been elected to head the Mary Washington Hospital Staff, Fredericksburg. Dr. J. C. MacKnight was named vice-president and Dr. John W. Painter, secretary-treasurer.

The Medical Staff of the Northampton-Accomack Memorial Hospital, Acomack, has named Dr. W. J. Sturgis, Jr., as president. Dr. J. E. Gladstone was re-elected vice-president and Dr. E. M. Henderson, secretary.

Dr. Wyndham B. Blanton,

Richmond, was guest speaker at the recent meeting of the Virginia Society of Colonial Dames of America. He discussed "Epidemics, Real and Imaginary, and Other Factors Affecting Virginia's First Century Population".

Southeastern Medical-Insurance Conference.

The 1958 Conference was held in Atlanta, Ga., on January 19th. Dr. Harry C. Bates, Jr., president of The Medical Society of Virginia, spoke on "Why Does Medicine Need Voluntary Health Insurance?", and Robert I. Howard, secretary of the Society was moderator of the discussion.

Dr. W. C. Moody,

Commander of the Department of Virginia of the Veterans of Foreign Wars, was guest speaker at the 13th anniversary dinner-dance of the Hopewell post. More than 200 attended the dinner, at which presidents of the various civic clubs, city officials and others were invited guests.

Drs. Weyle and Howard.

Drs. W. Leonard Weyle and Robert L. Howard have been elected members of the Board of Directors of the Arlington County Unit of the American Cancer Society.

Dr. Robert Q. Marston,

Richmond, has been named a member of the Virginia Committee for the selection of Rhodes scholars.

Dr. Walter B. Martin,

Norfolk, has been honored by the United States Junior Chamber of Commerce through the Norfolk Chamber for his work as a judge in the national organization's pick of the 10 outstanding young Jaycees of the nation for 1956. He was presented a certificate of appreciation.

American College of Surgeons.

A four-day Sectional Meeting of the College will be held in New York City, March 3-6. More than 4,000 surgeons, surgical specialists, nurses and related medical personnel from Canada and the United States are expected to attend.

The program will include hospital clinics, panel discussions, symposia, scientific papers, technical exhibits, medical motion pictures, cine-clinics, in general sessions, and separate prorgams in the specialties of otolaryngology, ophthalmology, urology, gynecology-obstetrics, orthopedic surgery, and thoracic surgery.

Dr. H. Prather Saunders, Associate Director, American College of Surgeons, is in charge of the Sectional Meeting program and inquiries may be addressed to him at 40 East Erie Street, Chicago 11, Illinois.

Dr. Andrew F. Giesen,

Christiansburg, has been re-elected president of the Radford-Montgomery chapter of the Virginia Society for Crippled Children.

Dr. Ernest B. Carpenter

Will serve as chairman of the Medical Advisory Committee of the Richmond-Henrico Chapter of the National Foundation for Infantile Paralysis. Others on the committee are Drs. H. W. Park, Weir M. Tucker, Count D. Gibson and William C. Gill.

Dr. A. J. Edwards,

Bristol, was recently given a testimonial dinner at Virginia Intermont College. More than 100 persons, including the college faculty and friends in a number of states attended. Dr. Edwards recently retired as physician for the College.

Congress on Diseases of the Chest.

The Fifth International Congress on Diseases of the Chest, sponsored by the American College of Chest Physicians, will be held in Tokyo, Japan, September 7-11, 1958. Eminent scientists from countries throughout the world will participate in the discussions, which will be simultaneously interpreted

into the three official languages for the Congress, i.e., Japanese, French and English.

For additional information, write Mr. Murray Kornfield, Executive Director, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

Dr. R. C. Longan, Jr.,

Richmond, has been appointed as a member of the State Hospital Board, filling the unexpired term of the late Dr. R. Finley Gayle, Jr.

Dr. Benedict Nagler,

Superintendent of the Lynchburg Training School and Hospital, was guest speaker at the December meeting of the Lynchburg Federation of the Parent-Teacher Association.

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Obituaries . . . .

Dr. Henry Cowles Rucker,

Prominent and beloved physician of Amelia County, died December 22nd. He was seventy-nine years of age. Dr. Rucker graduated from the George Washington University School of Medicine, Washington, D. C., in 1902, and began his practice in Wise County. He practiced for five years in Richmond before locating in Amelia County in 1917. In 1953, Dr. Rucker was selected by Governor John S. Battle to be Virginia's guest of honor at the first Western Hemisphere Conference of the World Medical Association in Richmond.

Dr. Rucker was a member of the Ruritan Club and the Masonic Lodge at Powhatan. He was a former president of the Amelia County Medical Society and was a Life Member of The Medical Society of Virginia, having joined in 1924.

His wife, two sons and a daughter survive him.

Dr. Noland MacKenzie Canter.

With the suddenly shocking death of Noland MacKenzie Canter on December 9, 1957, the citizens of Harrisonburg and Rockingham County, in fact, the citizens of Virginia, have lost a great christian physician and friend. His kindly interest in people of any station of life, and his great concern for the public welfare, spiritually as well as medically, endeared him to the hearts of all who knew him, and made his loss well nigh irreparable.

Dr. Canter was born near Fredericksburg, on July 22, 1890. He received his early education in the community of his birth and at Randolph-Macon Academy. He was a graduate of Randolph-Macon College with an AB Degree, and from Johns Hopgins University on June 10, 1913, as a Doctor of Medicine. He served his country as Captain in the Medical Corps of the United States Army from 1917 to 1924. He was radiologist at Walter Reed Hospital in Washington, D. C., from 1920 to 1924. Dr. Canter was a member of the North American Radiological Society, the Virginia Radiological Society, The Medical Society of Virginia, the American Medical Association, the Rockingham County Medical Society, and the Valley of Virginia Medical Society. He was also a member of the Rockingham Union Lodge of Masons and he received a Doctor of Science degree from Randolph-Macon College in 1955.

Dr. Canter was the first radiologist of the Rockingham Memorial Hospital, a position he held for twenty-seven years. He kept up with all the advances in the science of x-ray and was largely responsible for having the most modern equipment

installed in the hospital. He was very active in the affairs of the community and was frequently called on for his inspiring talks. He was one of the founders and an active worker in the Rockingham-Harrisonburg, Virginia Cancer Society, and was deeply interested in the research made to curb this dreaded disease.

To Dr. Canter's colleagues and the host of friends that he possessed, he was always a gentle person, characterized by a certain sweetness and a gay grace. To his patients, he imparted a sense of comfort and strength.

His early spiritual development began at the knee of a devoted christian mother, a highly honored Methodist minister father, associated with his brothers, Dr. Hall Canter and Dr. Harry Canter, and his sister, Mrs. Julia Mahood. With these close religious relationships, it is not remarkable that Noland was ever conscience of his indebtedness to Christ, his responsibility in spreading the Gospel, and in every walk of life serving his Master. Work in the Methodist Church filled a great part of his life. He was a delegate to many state and national Councils of Churches. He was a member of the pastoral relations committee and president of the Conference Board of Hospitals and Homes for the Virginia Conference. He was a member of the Board of Stewards of the Ashbury Methodist Church, and served as an inspiring teacher of the Brotherhood Bible Class for many years.

On June 9, 1921, he married Miss Mary Virginia Yancey, who survives him. Besides his wife, he is survived by three sons, Dr. N. M. Canter, Jr., of Harrisonburg; Mr. Harry Yancey Canter of Bethesda, Maryland; and Dr. Hall Gibbons Canter of Arlington.

In his daily work and associations, he was always ready to give helpful counsel, being always kind, gracious, and dignified. In more recent years, he devoted countless hours to the advancement and betterment of the hospital and its facilities. He was a congenial colleague and a loyal friend.

Therefore, Be It Resolved that these facts and sentiments be recorded in the minutes of the Rockingham County Medical Society, and the Staff of the Rockingham Memorial Hospital, and a copy be sent to the Virginia Medical Monthly.

Be It Further Resolved that a copy of these sentiments be sent to the family of Dr. Canter as an expression of our deep respect and abiding sympathy in their bereavement.

George G. Tanner, M.D.
H. Grant Preston, M.D.

Dr. Eugene Andrew MacCornack,

Boulder, Colorado, died December 8th, at the age of seventy-one. He was a graduate of the University of Illinois in 1913. Dr. MacCornack practiced for some time in Lynchburg and in Warrenton. He was a member of The Medical Society of Virginia, having joined in 1937. His wife survives him.

Dr. Reynolds.

Dr. Richard Moncure Reynolds, general medical practitioner in Norfolk for 27 years, died October 29, 1957, in a Norfolk hospital. He had been hospitalized for three weeks with a coronary occlusion.

A lifelong resident of Norfolk, he was the husband of Mrs. Margaret Sheppard Reynolds, whom he married June 11, 1931, in Richmond, and the son of Mrs. Sallie Vicar Reynolds of Norfolk, and the late Benjamin F. Reynolds.

Educated in the Norfolk public schools, he graduated from Maury High School, and later attended Randolph Macon College. He received his M.D. degree in 1928 from the Medical College of Virginia, and the same year interned at St. Vincent's Hospital.

For many years he was associated with Dr. P. St. L. Moncure, and was active with him on the Gynecology Clinic at St. Vincent's Hospital.

He was a past president of the Tidewater Academy of General Practice, and the Virginia Academy of General Practice, a member of The Medical Society of Virginia, the Norfolk County Medical Society, the Seaboard Medical Society, the Virginia Academy of General Medical Practice, and the American Medical Association. He was a member of the staff of DePaul Hospital.

He was always a congenial colleague, a loyal friend, and beloved by all who knew him.

Therefore, Be It Resolved, that the members of the Norfolk County Medical Society extend their deepest sympathy and love to the family of the late Dr. Reynolds in the great loss they have sustained, and invoke the healing protection and guidance of Divine Providence upon them in their sorrow, and

Be It Further Resolved, that this resolution be recorded in the Minutes of the Norfolk County Medical Society and copies be sent to members of the family and to the Virginia Medical Monthly.

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1. Axelrod, A. E.; Beaton, J. R.; Cannon, P. R., and others: Symposium on Protein Metabolism, New York, The National Vitamin Foundation, Incorporated, (March) 1954, p. 100.

2. Proceedings of a Conference on the Clinical Use of Anabolic Agents, Chicago, Illinois, G. D. Searle & Co., April 9, 1956, pp. 32-35.

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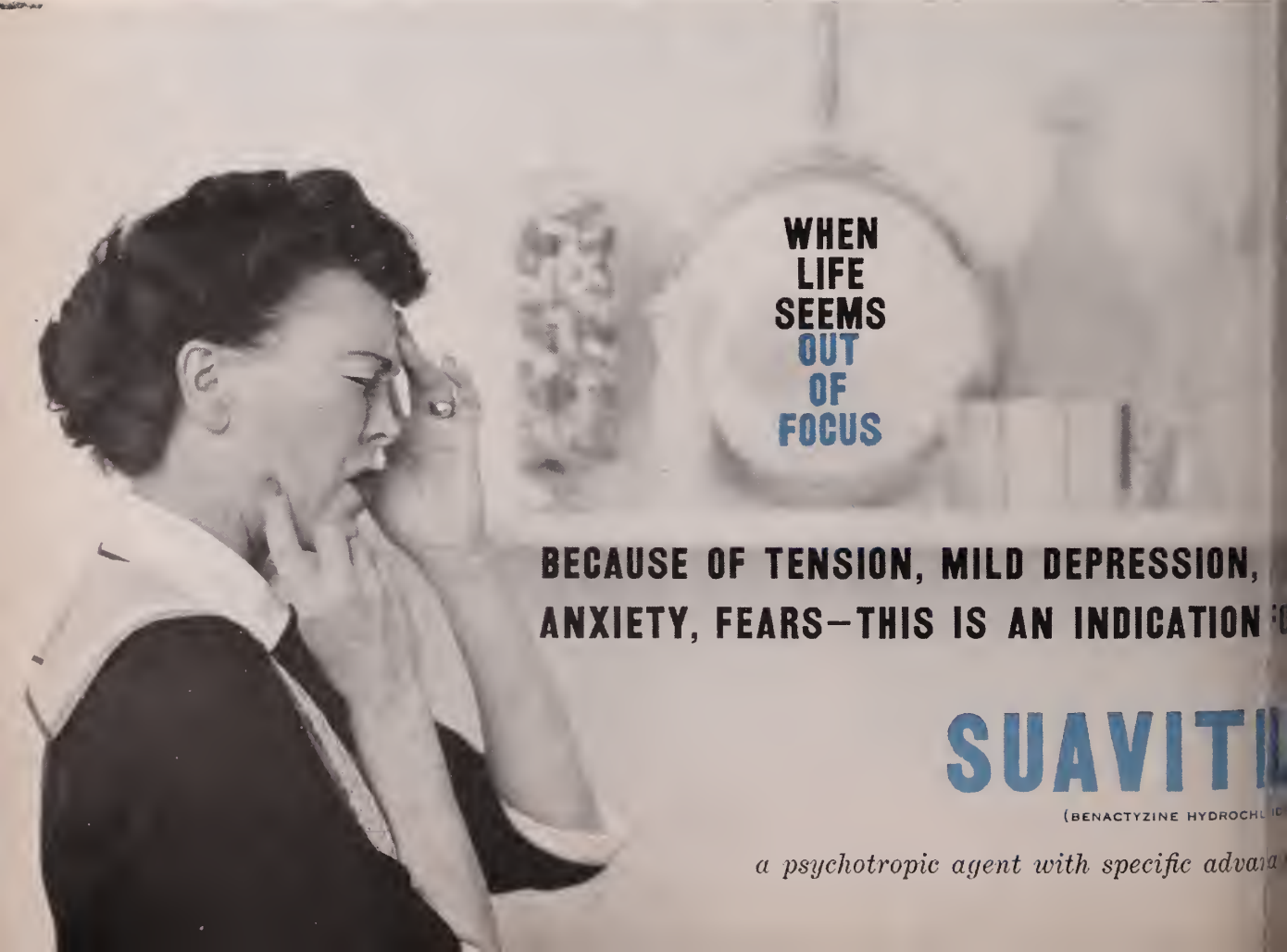
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TAKE A NEW LOOK AT ALLERGENS*
TAKE A LOOK AT NEW DĪMETANE

There is no antihistamine better than DIMETANE for allergic protection. DIMETANE gives you good reasons to re-examine the antihistamine you are now using: unexcelled potency, unsurpassed therapeutic index and relative safety...minimum drowsiness or other side effects. Has been effective where other antihistamines have failed. DIMETANE Extentabs® (12 mg.) protect for 10-12 hours on one tablet. Also available: Tablets (4 mg.), Elixir (2 mg. per 5 cc.).

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Ethical Pharmaceuticals of Merit Since 1878

*Typical Allergens: Animal Hair and Dander • Pollen • Molds • Bacteria and Viruses • Feathers • Insect Scales • Vegetable Fibers and Seeds Plant Juices • House Dust • Drugs and Chemicals • Minerals and Metals.

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Dīmetane® (PARABROMDYLAMINE MALEATE)

EVERY WOMAN
WHO SUFFERS
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MENOPAUSE
DESERVES
"PREMARIN"®

widely used
natural, oral
estrogen

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is the symbol
of the
Standardized
Tablets
Quinidine Sulfate
Natural
0.2 Gram
(approx. 3 grains)
produced by
Davies, Rose & Co., Ltd.

By specifying the name, the physician will be assured that this standardized form of Quinidine Sulfate Natural will be dispensed to his patient.

Clinical samples sent to physicians on their request

Davies, Rose & Co., Ltd.
Boston 18, Mass.
Q4

For Real Pain ...give real relief:

A.P.C. WITH Demerol® tablets

Each tablet contains:

Aspirin	200 mg. (3 grains)
Phenacetin	150 mg. (2½ grains)
Caffeine	30 mg. (½ grain)
Demerol hydrochloride	30 mg. (½ grain)

Average Dose:

1 or 2 tablets.

Narcotic blank required.

Potentiated Pain Relief

WINTHROP LABORATORIES

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Demerol (brand of meperidine), trademark reg. U.S. Pat. Off.

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BONADOXIN®

STOPS MORNING SICKNESS... BUT





...IT DOESN'T STOP THE PATIENT

BONADOXIN brings relief to 88.1% of patients... often within a few hours.[1,2] But it does not produce drowsiness, or side effects associated with over-potent antinauseants. With safe BONADOXIN, "toxicity and intolerance...[is] zero."[2]

Is she blue at breakfast? Prescribe BONADOXIN. Usually just one tablet at bedtime stops nausea and vomiting of pregnancy...

and just one supplies the full 50 mg. of pyridoxine. ⇦

EACH TABLET CONTAINS:
MECLIZINE HCl . . . . . 25 mg.
PYRIDOXINE HCl . . . . . 50 mg.
Bottles of 25 and 100.

References: 1. Groskloss, H. H., et al: Clin. Med. 2:885 (Sept.) 1955. 2. Goldsmith, J. W.: Minnesota Med. 40:99 (Feb.) 1957.

...and for a nutritional buildup plus freedom from leg cramps*

STORCAVITE®

phosphate-free calcium, 10 essential vitamins, 8 important minerals. Bottles of 100.

*due to calcium-phosphorus imbalance

Roerig Rx

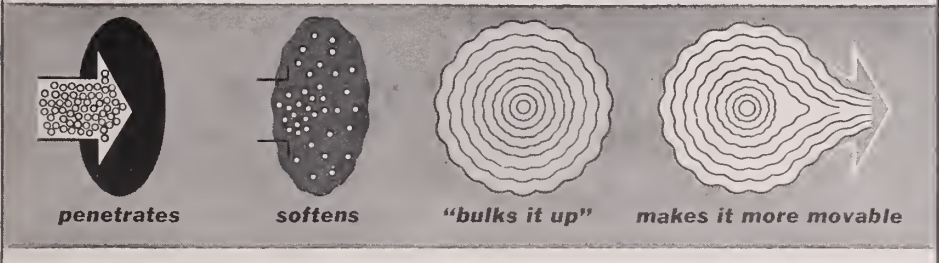
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Division, Chas. Pfizer & Co., Inc.

a *penetrant* emulsion for chronic constipation

KONDREMUL® (PLAIN)

COLLOIDAL EMULSION OF MINERAL OIL AND IRISH MOSS

permeates the hard, stubborn stool of chronic constipation with millions of microscopic oil droplets, each encased in a film of Irish moss... makes it more movable



KONDREMUL PATCH

KONDREMUL *(Plain)*—Pleasant-tasting and non-habit-forming. Contains 55% mineral oil. Supplied in bottles of 1 pt.

KONDREMUL *(With Cascara)*—0.66 Gm. nonbitter Ext. Cascara per tablespoon. Bottles of 14 fl.oz.

KONDREMUL *(With Phenolphthalein)*—0.13 Gm. phenolphthalein (2.2 gr.) per tablespoon. Bottles of 1 pt.

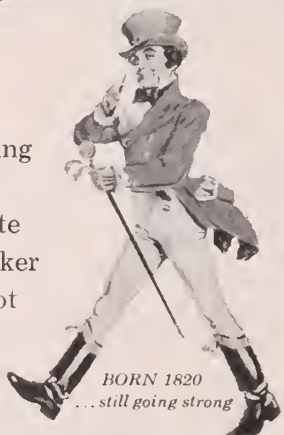
When taken as directed before retiring, KONDREMUL does not interfere with absorption of essential nutrients.

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Generations of skill in the art of whisky making are reflected in the good taste of Johnnie Walker Scotch. Why not try some soon?



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SCOTCH WHISKY

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FOR EXCEPTIONAL CHILDREN

Year round private home and school for infants, children and adults on pleasant 250 acre farm near Charlottesville.

Write for booklet.

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FREE UNION **VIRGINIA**

The State Board of Medical Examiners of Virginia

The next meeting of the Virginia Board of Medical Examiners will be held in the Richmond Hotel, Richmond, Virginia, June 11, 1958. The examinations will be held in the same hotel June 12th to 14th, inclusive. All applications and other documents pertaining to the examinations or to matters to be discussed by the Board must be on file in the Secretary's office on or before May 20, 1958. The Secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.

For the Discriminating Eye Physician

Depend on the Services of a Guild Optician

GUILD OF PRESCRIPTION OPTICIANS OF AMERICA

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STOP respiratory congestion orally

relief in minutes..lasts for hours

In the common cold, nasal allergies, sinusitis, and postnasal drip, one timed-release Triaminic tablet brings welcome relief of symptoms *in minutes*. Running noses stop, clogged noses open—and *stay* open for 6 to 8 hours. The patient can breathe again.

With *topical* decongestants, "unfortunately, the period of decongestion is often followed by a phase of secondary reaction during which the congestion may be equal to, if not greater than, the original condition. . . ."* The patient then must reapply the medication and the vicious cycle is repeated, resulting in local overtreatment, pathological changes in nasal mucosa, and frequently "nose drop addiction."

Triaminic does not cause secondary congestion, eliminates local overtreatment and consequent nasal pathology.

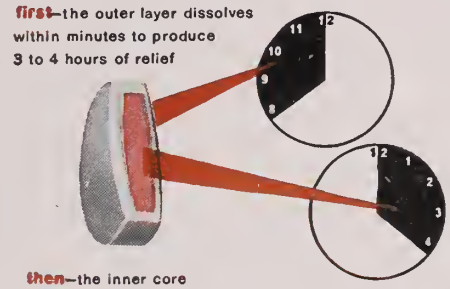
*Morrison, L. F.: Arch. Otolaryng. 59:48-53 (Jan.) 1954.

Each double-dose "timed-release" TRIAMINIC *Tablet contains:*

Phenylpropanolamine hydrochloride	50 mg.
Pyrilamine maleate	25 mg.
Pheniramine maleate	25 mg.

Dosage: 1 tablet in the morning, afternoon, and in the evening if needed.

Each double-dose "timed-release" tablet keeps nasal passages clear for 6 to 8 hours— provides "around-the-clock" freedom from congestion on just three tablets a day



Also available: Triaminic Syrup, for children and those adults who prefer a liquid medication.

Triaminic®

"timed-release" tablets

STOP *running noses . . . and open stuffed noses orally*

SMITH-DORSEY • a division of The Wander Company • Lincoln, Nebraska • Peterborough, Canada



Hospital practice of infant feeding

Standard formulas for NEWBORNS

Breast feeding is the procedure of choice for the newborn. But it may need to be complemented with standard formulas given here.

The first feeding, 12 hours after birth, consists of a prelacteal solution of 5% Karo Syrup, one or two ounces, repeated at two-hour intervals. Breast feeding is started on the second day for five-minute intervals and the prelacteal feeding continued immediately thereafter and between nursings.

Formula feeding is given on the second day if breast feeding is denied. The small infant prefers the three-hour schedule and the large infant the four-hour schedule.

The initial formula is a low-caloric milk mixture, gradually increased in concentration over several day intervals according to tolerance. Standard formulas for whole cow's milk or evaporated milk modified with diluted Karo Syrup as shown here, constitute the dietary regimen for well newborns.

First formulas for newborns, concentrated according to tolerance

Evaporated Milk Formulas: 3 oz. q 4h x 6 feedings

	FORMULA I	FORMULA II	FORMULA III
	12.5 cals./oz.	16 cals./oz.	20 cals./oz.
Evap. Milk . .	4 oz	5 oz.	6 oz.
Water	14 oz.	13 oz.	12 oz.
Karo Syrup . .	1/2 oz.	3/4 oz.	1 oz.

Whole Cow's Milk Formulas: 3 1/2 oz. q 4h x 6 feedings

	FORMULA I	FORMULA II	FORMULA III
	11 cals./oz.	11.5 cals./oz.	13.5 cals./oz.
Whole Milk . .	8 oz.	9 oz.	10 oz.
Water	12 oz.	11 oz.	10 oz.
Karo Syrup . .	1/2 oz.	3/4 oz.	1 oz.

ADVANTAGES OF KARO IN INFANT FEEDING



Composition: Karo is a superior maltose-dextrin mixture because the dextrins are non-fermentable and the maltose is rapidly transformed into dextrose which requires no digestion.

Concentration: Volume for volume Karo furnishes twice as many calories as similar milk modifiers in powdered form.

Purity: Karo is processed at sterilizing temperatures, sealed for complete hygienic protection and devoid of pathogenic organisms.

Low Cost: Karo costs 1/5th as much as expensive milk modifiers and is available at all food stores.

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help reduce
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patients



for total management
of your hypertensive
patients rely upon

RAUDIXIN

Squibb Whole Root Rauwolfia Serpentina

Raudixin provides gradual, sustained lowering of blood pressure in hypertensive patients, as well as a mild bradycardia. Hence, the work load of the heart is reduced.

"... often preferred to reserpine in private practice because of the additional activity of the whole root."

Corrin, K. M.: Am. Pract. & Dig. Treatment 8:721 (May) 1957.

Tranquilizing Raudixin helps relax the anxious hypertensive patient so that he is better able to cope with external pressures without being overwhelmed by them. By reducing these anxieties and tensions, Raudixin helps break the mental tension –hypertension cycle.

Dosage: Two 100 mg. tablets once daily; may be adjusted within range of 50 to 300 mg. *Supply:* 50 and 100 mg. tablets. Bottles of 100, 1000 and 5000.

SQUIBB *Squibb Quality—the Priceless Ingredient*

"RAUDIXIN" IS A SQUIBB TRADEMARK

WHY SENSITIZE

in topical and ophthalmic infections

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POLYMYXIN B—BACITRACIN OINTMENT

to insure broad-spectrum therapy with minimum allergenicity

For topical use: in ½ oz. and 1 oz. tubes.
For ophthalmic use: in ⅛ oz. tubes.



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ACHROCIDIN*

TETRACYCLINE-ANTIHISTAMINE-ANALGESIC COMPOUND LEDERLE

A versatile, well-balanced formula capable of modifying the course of common upper respiratory infections . . . particularly valuable during respiratory epidemics; when bacterial complications are likely; when patient's history is positive for recurrent otitis, pulmonary, nephritic, or rheumatic involvement.

Adult dosage for ACHROCIDIN Tablets and new caffeine-free ACHROCIDIN Syrup is two tablets or teaspoonfuls of syrup three or four times daily. Dosage for children according to weight and age.

Available on prescription only.

TABLETS *(sugar coated) Each Tablet contains:*

ACHROMYCIN® Tetracycline	125 mg.
Phenacetin	120 mg.
Caffeine	30 mg.
Salicylamide	150 mg.
Chlorothen Citrate	25 mg.

Bottles of 24 and 100.

SYRUP *(lemon-lime flavored) Each teaspoonful (5 cc.) contains:*

ACHROMYCIN® Tetracycline equivalent to tetracycline HCl	125 mg.
Phenacetin	120 mg.
Salicylamide	150 mg.
Ascorbic Acid (C)	25 mg.
Pyrilamine Maleate	15 mg.
Methylparaben	4 mg.
Propylparaben	1 mg.

Bottle of 4 oz.



rapidly relieves the ..... debilitating symptoms

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Component and Other Medical Societies in Virginia

(Officers and Others are Requested to Notify the **Monthly** of Changes)

SOCIETY	PRESIDENT	SECRETARY	TIME OF MEETING
Accomack County	J. Fred Edmonds, Accomac	Dr. J. C. Doughty, Onancock	Quarterly
Albemarle County	M. D. Foster, Charlottesville	Dr. George Spence, Charlottesville	Monthly
Alexandria	Eugene R. Grether, Alexandria	H. Glen Thompson, Alexandria	Monthly
Alleghany-Bath Counties	M. I. Hanna, Covington	George N. Chucker, Clifton Forge	Bi-Monthly
Amherst-Nelson Counties	Lyddane Miller, Amherst	J. F. Thaxton, Tye River	
Arlington County	Thos. A. McGavin, Arlington	Bertram C. Snyder, Arlington	Monthly
Augusta County	B. K. Weems, Waynesboro	William C. Smith, Waynesboro	Quarterly
Bedford County	D. H. Robinson, Bedford	O. B. Darden, Bedford	Quarterly
Botetourt County	M. S. Stinnett, Buchanan	E. L. Coffey, Buchanan	
Buchanan-Dickenson Counties	Bradley Berry, Grundy	J. S. Richardson, Grundy	Monthly
Charlotte County	Stuart Wilson Tuggle, Keysville	Thomas Watkins, Drakes Branch	
Culpeper County	J. Bernard Jones, Culpeper	James P. Baker, Culpeper	Monthly
Danville-Pittsylvania	Samuel Newman, Danville	Samuel Atkins, Danville	Monthly
Fairfax County	Thomas E. Haggerty, Falls Church	Andrew Tessitore, Vienna	Monthly
Fauquier County	Evan H. Ashby, Jr., Remington	James L. Dellinger, Warrenton	Monthly
Floyd County	J. C. Rutrough, Willis	F. C. Bedsaul, Floyd	
Fouth District	Robert Keeling, Petersburg	Clyde W. Vick, Jr., Petersburg	Five times a year
Fredericksburg	T. S. Lloyd, Jr., Fredericksburg	W. T. Liddle, Fredericksburg	Monthly
Halifax County	William R. Watkins, South Boston	John R. Frierson, Jr., South Boston	Quarterly
Hanover County	John D. Hamner, Jr., Ashland	Claude K. Kelly, Mechanicsville	October
Hampton	Frank Kearney, Phoebus	Helen Dorsey, Hampton	Quarterly
Hopewell	D. P. Moore, Jr., Hopewell	W. P. Youngblood, Hopewell	Monthly
James River	Russell Snead, Columbia	J. H. Yeatman, Fork Union	Quarterly
Lee County	Beryl H. Owens, Rose Hill	H. A. Kinser, Pennington Gap	Quarterly
Loudoun County	John D. Wynkoop, Leesburg	Robert A. Orr, Leesburg	Monthly
Louisa County	Griffith B. Daniel, Louisa	A. R. Southall, Louisa	Only call meetings
Lynchburg	J. E. Haynesworth, Lynchburg	Lewis F. Somers, Lynchburg	Monthly
Medical Society of Virginia	H. C. Bates, Jr., Arlington	R. I. Howard, Richmond	Richmond, October 12-15, 1958
Mid-Tidewater	A. W. Lewis, Jr., Aylett	M. H. Harris, West Point	Quarterly
Norfolk County	James F. Waddill, Norfolk	John S. Thiemeyer, Jr., Norfolk	Semi-Monthly
Northampton County	H. L. Denoon, Jr., Nassawadox	John R. Freeman, Cape Charles	Quarterly
Northern Neck	Horace Kerr, Colonial Beach	M. B. Lamberth, Kilmarnock	Quarterly
Northern Virginia	M. J. W. White, Luray	Dennis P. McCarty, Front Royal	Three times a year
Orange County	David H. Miller, Orange	J. G. Bruce, Jr., Gordonsville	Call Meetings
Patrick-Henry Counties	Lester A. Faudree, Bassett	George W. Curwen, Fieldale	Quarterly
Portsmouth	Russell M. Cox, Portsmouth	M. C. Glynn, Jr., Portsmouth	Monthly
Princess Anne County	Herbert Swertfeger, Va. Beach	Julian A. White, Virginia Beach	Monthly
Richmond	Webster Barnes, Richmond	Patty R. Boatwright, Richmond	Semi-Monthly
Roanoke	David S. Garner, Roanoke	Peter A. Wallenborn, Jr., Roanoke	Monthly
Rockingham County	George Nipe, Harrisonburg	Catherine Craun, Harrisonburg	Quarterly
Rockbridge County	Brooke B. Mallory, Lexington	O. Hunter McClung, Lexington	Monthly
Russell County	Rohert F. Gillespie, Lebanon	W. A. Davis, Dante	
Scott County	W. L. Griggs, Jr., Gate City	G. C. Honeycutt, Jr., Gate City	Monthly
Smyth County	O. O. Smith, Jr., Marion	R. D. Campbell, Saltville	Quarterly
Southwestern Virginia	Reverdy H. Jones, Jr., Roanoke	William S. Credle, Bristol, Tenn.	Semi-annually
Tazewell County	J. W. Fullerton, Tazewell	D. A. Cunningham, Richlands	Quarterly
Tri-County	M. M. Bray, Suffolk	J. E. Rawls, Jr., Suffolk	Quarterly
Tri-State	John K. Webb, Greenville, S. C.	R. B. Davis, Greensboro, N. C.	February
Va. Acad. Gen. Practice	Malcolm H. Harris, West Point	R. G. McAllister, Richmond	May 8-11
Va. Chap. Amer. Col. Phys.	Edward S. Ray, Richmond	Charles G. Pearson, Charlottesville	October
Va. Sec. Amer. Col. Chest Phys.	T. Dewey Davis, Richmond	William H. Harris, Jr., Richmond	March 1
Va. Diabetes Assoc.	Robert C. Crawford, Roanoke	Robert S. Hutcheson, Roanoke	May
Va. Ob-Gyn. Soc.	Paige E. Thornhill, Norfolk	Brock D. Jones, Jr., Norfolk	Semi-annually
Va. Orthopedic Soc.	J. H. Allan, Charlottesville	R. H. Fisher, Roanoke	Spring
Va. Pediatric Soc.	A. Page Booker, Charlottesville	Robert H. Cox, Jr., Lynchburg	Semi-annually
Va. Peninsula Soc.	O. J. Legg, Warwick	B. H. Inloes, Jr., Hampton	Monthly except June, July & Aug.
Va. Neuropsychiatric Soc.	Thomas F. Coates, Richmond	W. D. Buxton, Charlottesville	April & October
Va. Radiological Soc.	Wm. H. Whitmore, Norfolk	Frank Kearney, Phoebus	Semi-annually
Va. Soc. Anesthesiology	Wm. B. Moncure, Richmond	Campbell Harris, Jr., Richmond	Semi-annually
Va. Soc. of O. L. & O.	Emanuel U. Wallerstein, Richmond	Maynard P. Smith, Richmond	October
Va. Soc. of Pathology	Karl Menk, Staunton	George J. Carroll, Suffolk	3 times a year
Va. Surgical Soc.	Guy W. Horsley, Richmond	Robert Payne, Jr., Norfolk	October
Va. Urological Soc.	Richard Lowe, Roanoke	Frank N. Buck, Jr., Lynchburg	October
Warwick-Newport News	I. Floyd Nesbitt, Warwick	John Q. Hatten, Newport News	Monthly
Williamsburg-James City	Linwood Farley, Williamsburg	B. E. Roebuck, Williamsburg	Monthly except for June, July & Aug.
Wise County	John H. Dellinger, Norton	Gordon E. Shull, Big Stone Gap	Every other month except Aug.
Wythe-Bland	P. C. Hendrix, Wytheville	E. C. Lanz, Wytheville	Monthly



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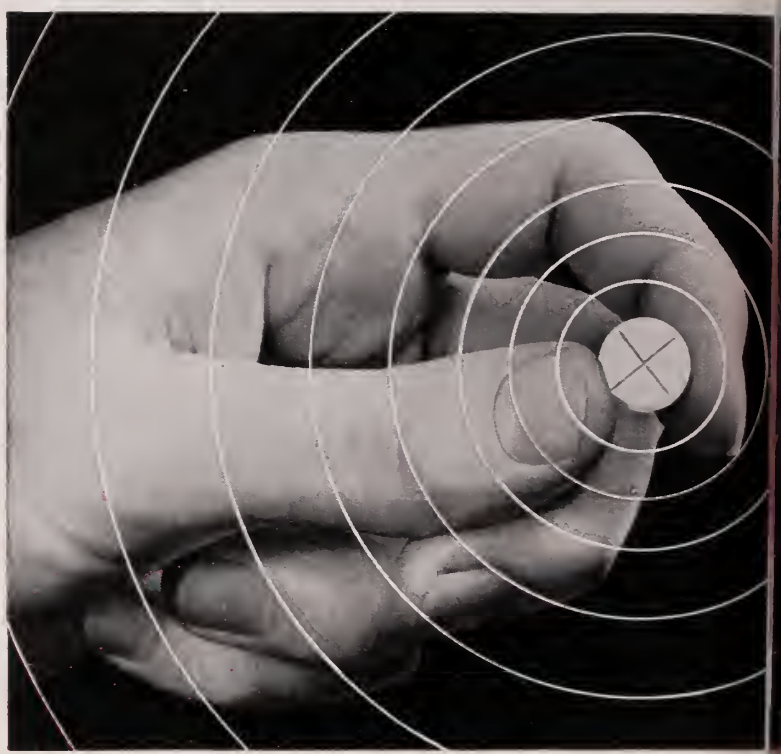
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ONLY ONE TABLET A DAY



now... unprecedented Sulfa therapy

KYNEX*

SULFAMETHOXYPYRIDAZINE LEDERLE

New authoritative studies show that KYNEX dosage can be reduced even further than that recommended earlier.[1] Now, clinical evidence has established that a single (0.5 Gm.) tablet maintains therapeutic blood levels extending beyond 24 hours. Still more proof that KYNEX stands alone in sulfa performance—

- Lowest Oral Dose In Sulfa History—0.5 Gm. (1 tablet) daily in the usual patient for maintenance of therapeutic blood levels
- Higher Solubility—effective blood concentrations within an hour or two
- Effective Antibacterial Range—exceptional effectiveness in urinary tract infections
- Convenience—the low dose of 0.5 Gm. (1 tablet) per day offers optimum convenience and acceptance to patients

NEW DOSAGE

The recommended adult dose is 1 Gm. (2 tablets or 4 teaspoonfuls of syrup) the first day, followed by 0.5 Gm. (1 tablet or 2 teaspoonfuls of syrup) every day thereafter, or 1 Gm. every other day for mild to moderate infections. In severe infections where prompt, high blood levels are indicated, the initial dose should be 2 Gm. followed by 0.5 Gm. every 24 hours. Dosage in children, according to weight; i.e., a 40 lb. child should receive ¼ of the adult dosage. It is recommended that these dosages not be exceeded.

Tablets:
Each tablet contains 0.5 Gm. (7½ grains) of sulfamethoxypyridazine. Bottles of 24 and 100 tablets.

Syrup:
Each teaspoonful (5 cc.) of caramel-flavored syrup contains 250 mg. of sulfamethoxypyridazine. Bottle of 4 fl. oz.

[1] Nichols, R. L. and Finland, M.: J. Clin. Med. 49:410, 1957.

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My patients complain that the pain tablets I prescribe are too slow-acting... they usually take about 30 to 40 minutes to work.

Why don't you try the new analgesic that gives faster, longer-lasting pain relief?

What is it... how fast does it act?

It's Percodan®—relieves pain in 5 to 15 minutes, with a single dose lasting 6 hours or longer.

How about side effects?

No problem. For example, the incidence of constipation with Percodan* is rare.

Sounds worth trying— what's the average adult dose?

One tablet every 6 hours. That's all.

Where can I get literature on Percodan?

Just ask your Endo detailman or write to:

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*U. S. Pat. 2,628,185. PERCODAN contains salts of dihydrohydroxycodeinone and homatropine, plus APC. May be habit-forming. Available through all pharmacies.

a Major Breakthrough in EDEMA— in HYPERTENSION



'DIURIL'

(CHLOROTHIAZIDE)

EDEMA—'DIURIL' is an entirely new, orally effective, nonmercurial diuretic—classed as the most potent and most consistently effective oral agent available—with activity equivalent to that of the parenteral mercurials. It has no known contraindications.

Indications: Any indication for diuresis is an indication for 'DIURIL'.

Dosage: One or two 500 mg. tablets of 'DIURIL' once or twice a day.

HYPERTENSION—'DIURIL' improves and simplifies the management of hypertension: it potentiates the action of antihypertensive agents and often reduces dosage requirements for such agents below the level of distressing side effects.

Indications: Hypertension of any degree of severity.

Dosage: One 250 mg. tablet 'DIURIL' two times daily to one 500 mg. tablet 'DIURIL' three times daily.

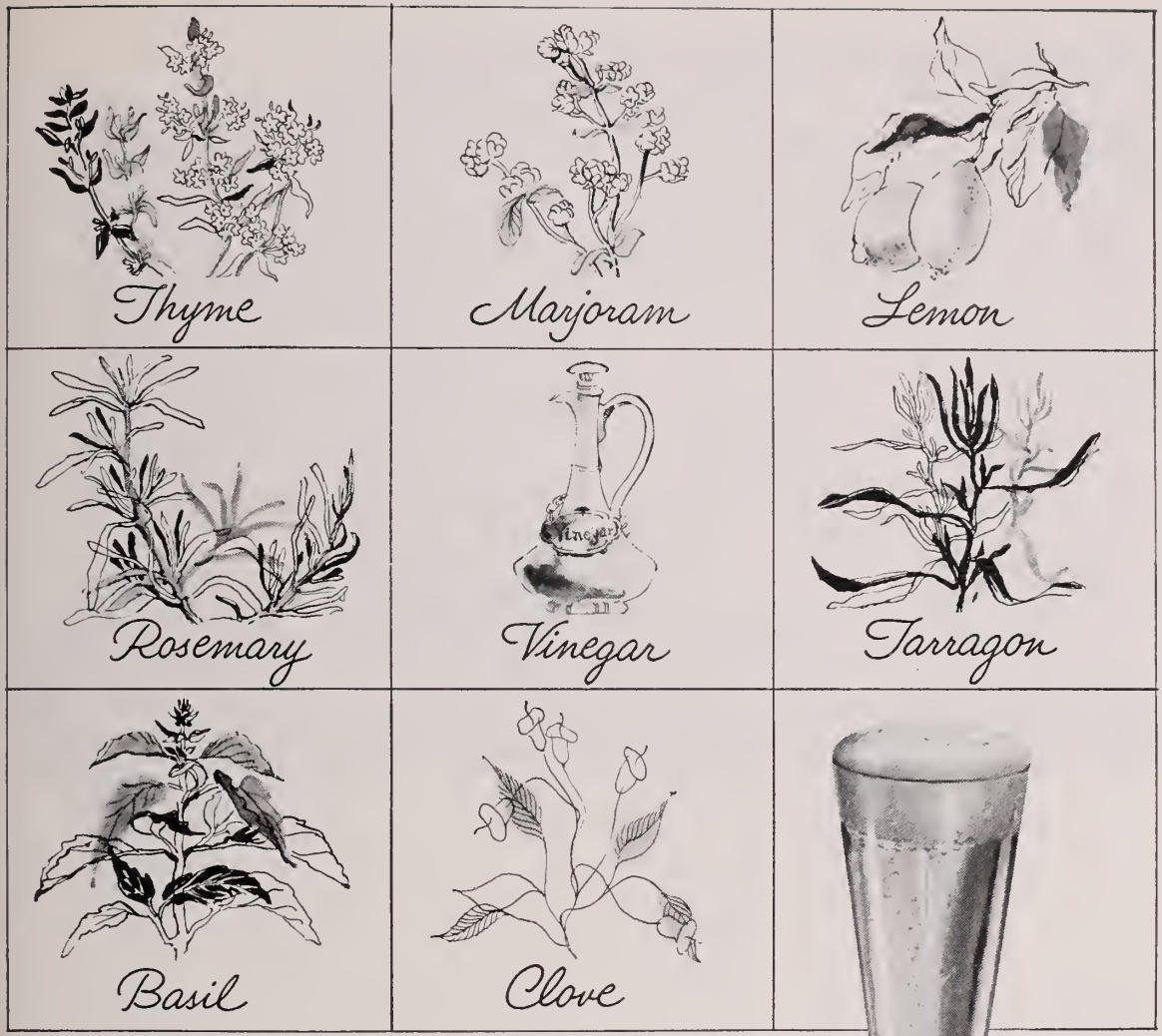
Supplied: 250 mg. and 500 mg. scored tablets 'DIURIL' (Chlorothiazide), bottles of 100 and 1,000.

'DIURIL' is a trademark of Merck & Co., Inc.

MSD

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A few suggestions on how to give your patient a diet he can "stick-to"—

—and a glass of beer, with your consent for a morale-booster

The Low Sodium Diet

Here are some things your patient can do to season his Low Sodium Diet. Spices and herbs, lemon and lime, variously flavored vinegars and some pepper are all he needs.

Thyme, marjoram and pepper add zest to hamburger. Chicken's delicious with lemon, rosemary and sweet butter to baste. He can try sweet butter with nutmeg on green beans, savory on limas, tarragon with carrots, basil with tomatoes. Onions boiled with whole clove and thyme delight the taste of an epicure!

With these flavor tricks to add zest to his meals—and a glass of beer* now and then, at your discretion, your patient has a diet that's both good tasting and good for him.

*Sodium: 7 mg./100 gm., 17 mg./8 oz. glass (Average of American Beers)

United States Brewers Foundation
Beer—America's Beverage of Moderation

If you'd like reprints of 12 different diets, please write United States Brewers Foundation, 535 Fifth Avenue, New York 17, N. Y.



SIGN OF GOOD TASTE

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H.T.S.



the new mixed-Sulfas Suspension designed for older children and adults

Providing the same advantages as its companion honey-sulfa suspensions, Honey-Diazine and Honey-Trisulfas, H.T.S. is prepared with pure clover honey—mint green in color . . . and taste appealing . . . designed for adults and older children.

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PHYSICIANS **PRODUCTS CO., INC.**
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"...alseroxylon is an antihypertensive agent of equal therapeutic efficacy to reserpine in the treatment of hypertension, but with significantly less toxicity."

Ford, R.V., and Moyer, J.H.: Rauwolfia Toxicity in the Treatment of Hypertension: Some Observations on Comparative Toxicity of Reserpine, a Single Alkaloid, and Alseroxylon, a Compound Containing Multiple Alkaloids, Postgrad. Med., January, 1958.



just two tablets
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virtually free from side actions

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When more potent drugs are needed, prescribe

Rauwiloid® + Veriloid®
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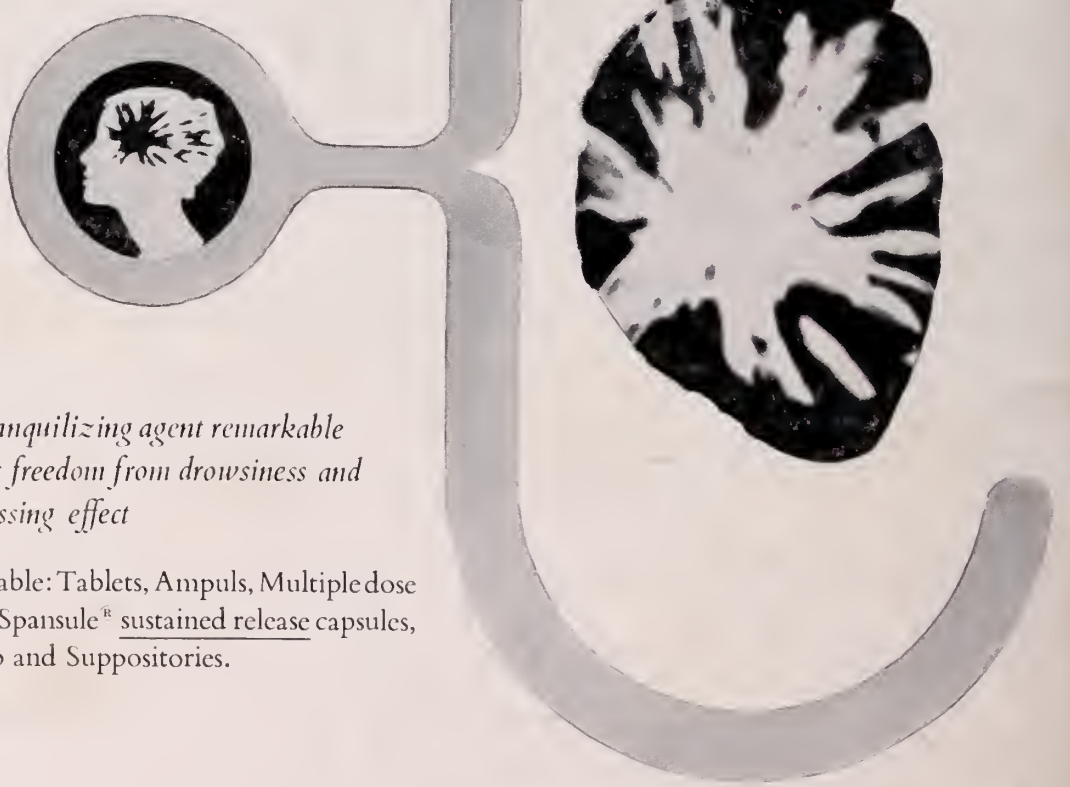
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the tranquilizing agent remarkable for its freedom from drowsiness and depressing effect

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ICIAL PUBLICATION OF THE MEDICAL SOCIETY OF VIRGINIA

VIRGINIA MEDICAL MONTHLY





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SPECIFICALLY

for petit mal

and psychomotor seizures

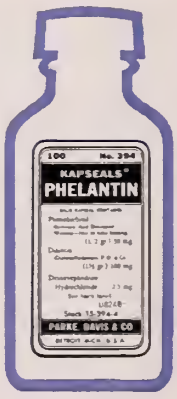


CELONTIN® KAPSEALS®

(methsuximide, Parke-Davis)









MEDICAMENTA VERA

PARKE, DAVIS & COMPANY

Clinical experience[1,2,3] indicates that CELONTIN:
provides effective control with minimal side effects in the treatment of petit mal and psychomotor epilepsy;
•frequently checks seizures in patients refractory to other medications;
•has not been observed to increase incidence or severity of grand mal attacks in patients with combined petit and grand mal seizures.

Optimal dosage of CELONTIN should be determined by individual needs of each patient. A suggested dosage schedule is one 0.3 Gm. Kapseal daily for the first week. If required, dosage may be increased thereafter at weekly intervals, by one Kapseal per day for three weeks, to maximum total daily dosage of four Kapseals (1.2 Gm.).

1. Zimmerman, F. T., and Burgemeister, B.: *Arch. Neurol. & Psychiat.* 72:720, 1954.
2. Zimmerman, F. T., and Burgemeister, B.: J.A.M.A. 157:1194, 1955.
3. Zimmerman, F. T.: *Arch. Neurol. & Psychiat.* 76:65, 1956.



the Parke-Davis family of anti-epileptics provides specificity and flexibility in treatment for convulsive disorders

for grand mal and psychomotor seizures

DILANTIN® Sodium (diphenylhydantoin sodium, Parke-Davis) is supplied in a variety of forms—including Kapseals® of 0.03 Gm. and of 0.1 Gm. in bottles of 100 and 1,000.

PHELANTIN® Kapseals (Dilantin 100 mg., phenobarbital 30 mg., desoxyephedrine hydrochloride 2.5 mg.), bottles of 100.

for the petit mal triad

CELONTIN® Kapseals (methsuximide, Parke-Davis), 0.3 Gm., bottles of 100.

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a superior psychochemical
for the management of both
minor and major
emotional disturbances



T.M.
Dartal
dihydrochloride
brand of thiopropazate dihydrochloride

- more effective than most potent tranquilizers
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Dartal is a unique development of Searle Research, proved under everyday conditions of office practice

It is a single chemical substance, thoroughly tested and found particularly suited in the management of a wide range of conditions including psychotic, psychoneurotic and psychosomatic disturbances.

Dartal is useful whenever the physician wants to ameliorate psychic agitation, whether it is basic or secondary to a systemic condition.

In extensive clinical trial Dartal caused no dangerous toxic reactions. Drowsiness and dizziness were the principal side effects reported by non-psychotic patients, but in almost all instances these were mild and caused no problem.

Specifically, the usefulness of Dartal has been established in psychoneuroses with emotional hyperactivity, in diseases with strong psychic overtones such as ulcerative colitis, peptic ulcer and in certain frank and senile psychoses.

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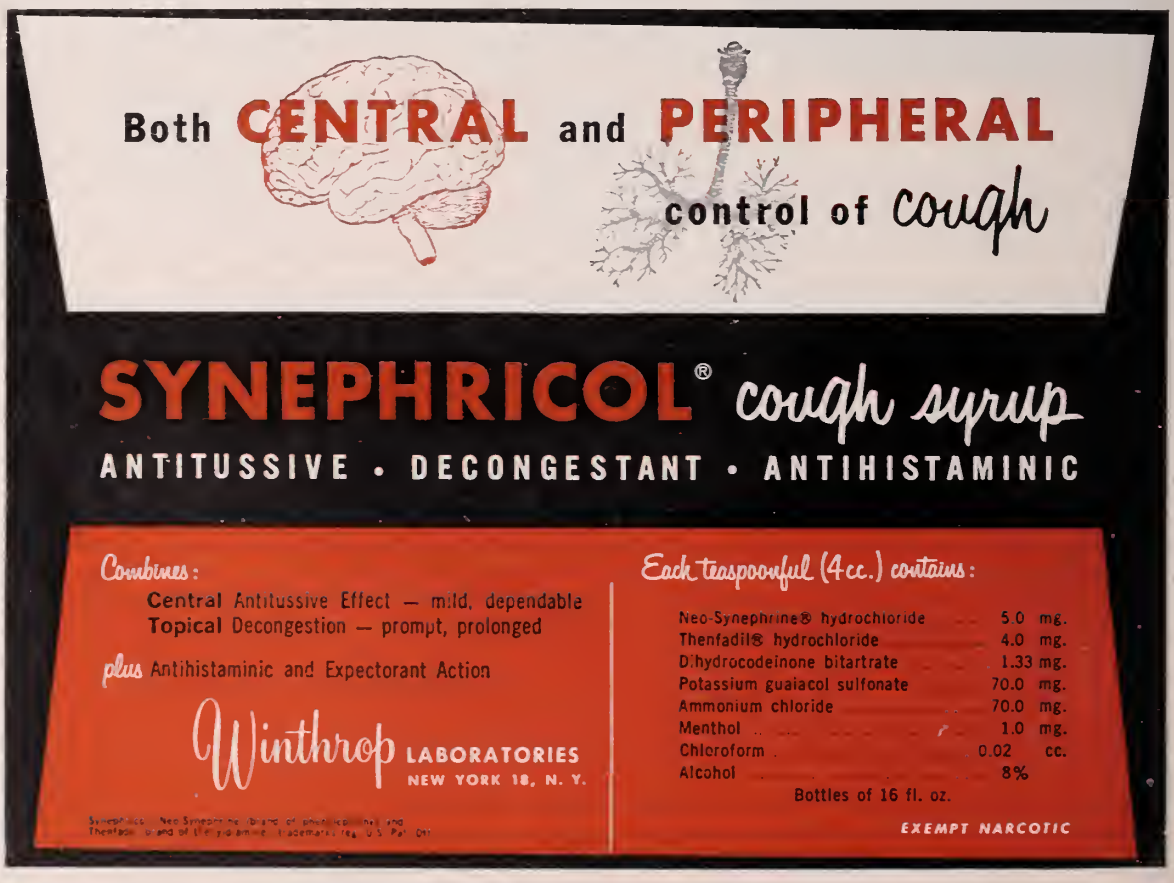
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Breast milk is satisfactory for the feeding of prematures in spite of the low protein and mineral and high fat content. But eventual formula feeding should provide a high protein and carbohydrate to satisfy the rapid-growing needs of the premature and low fat content because of limited digestive capacity.

Feedings of small prematures are most effectively administered by the indwelling polythene nasal catheter and of large prematures, by bottle with small nipples.

The first six feedings should be a sterile 5% solution of Karo Syrup at 2 to 3 hour intervals; for subsequent feedings, breast milk or formula should be added in gradually increasing amounts according to tolerance and requirements, as indicated in the table below.

Initial feeding schedules for premature infants

(Feedings Started After 36 Hours and Continued at 2 to 3 Hour Intervals)

FEEDINGS	COMPOSITION	QUANTITY
First Six	5% Karo	2-5 ml.
7th and 8th	2 parts 5% Karo 1 part breast milk or formula	6-10 ml.
9th and 10th	1 part 5% Karo 1 part breast milk or formula	8-15 ml.
11th and 12th	1 part 5% Karo 2 parts breast milk or formula	10-18 ml.
Subsequently	Breast or formula feeding	12-20 ml.

ADVANTAGES OF KARO® IN INFANT FEEDING



Composition: Karo is a superior maltose-dextrin mixture because the dextrins are non-fermentable and the maltose is rapidly transformed into dextrose which requires no further digestion.

Concentration: Volume for volume Karo furnishes twice as many calories as similar milk modifiers in powdered form.

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Low Cost: Karo costs 1/5th as much as expensive milk modifiers and is available at all food stores.

Medical Division
CORN PRODUCTS REFINING COMPANY
17 Battery Place, New York 4, N.Y.

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and Protein Nutrition in Vascular Disease

Whether the eventual solution of the problem of atherogenesis will come out of the field of dietetics, biophysics, or pharmacology, one fact remains undeniable:

Adequate protein nutrition is considered of importance for the age group most commonly affected by disease of the vascular system, so that the demands of good nutritional health might be met.

Meat is outstanding among protein foods. It supplies all the essential amino acids, and closely approaches the quantitative proportions needed for biosynthesis of human tissue.

In addition, it is an excellent source of B vitamins, including B_6 and B_{12}, as well as iron, phosphorus, potassium, and magnesium.

When curtailment of fat intake is deemed indicated, meat need not always be denied the patient. Visible fat obviously should not be eaten. But the contained percentage of invisible (interstitial) fat is well within the limits of reasonable fat allowance.

The nutritional statements made in this advertisement have been reviewed by the Council on Foods and Nutrition of the American Medical Association and found consistent with current authoritative medical opinion.

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Main Office, Chicago...Members Throughout the United States



REMARKABLE EFFECTIVENESS PLUS A SAFETY RECORD UNMATCHED IN SYSTEMIC ANTIBIOTIC THERAPY TODAY

Actually, after almost six years of extensive use, there has not been a single report of a serious reaction to ERYTHROCIN. And, after all this time, the incidence of resistance to ERYTHROCIN has remained exceptionally low.

You'll find ERYTHROCIN is highly effective against the majority of coccal infections and may also be used to counteract complications from severe viral attacks. It comes in *Filmtabs* and in Oral Suspension. Abbott

802069

Compocillin-V®

for those penicillin-sensitive organisms



602071

Indications

Against all penicillin-sensitive organisms. For prophylaxis and treatment of complications in viral conditions. And as a prophylaxis in rheumatic fever and in rheumatic heart disease.

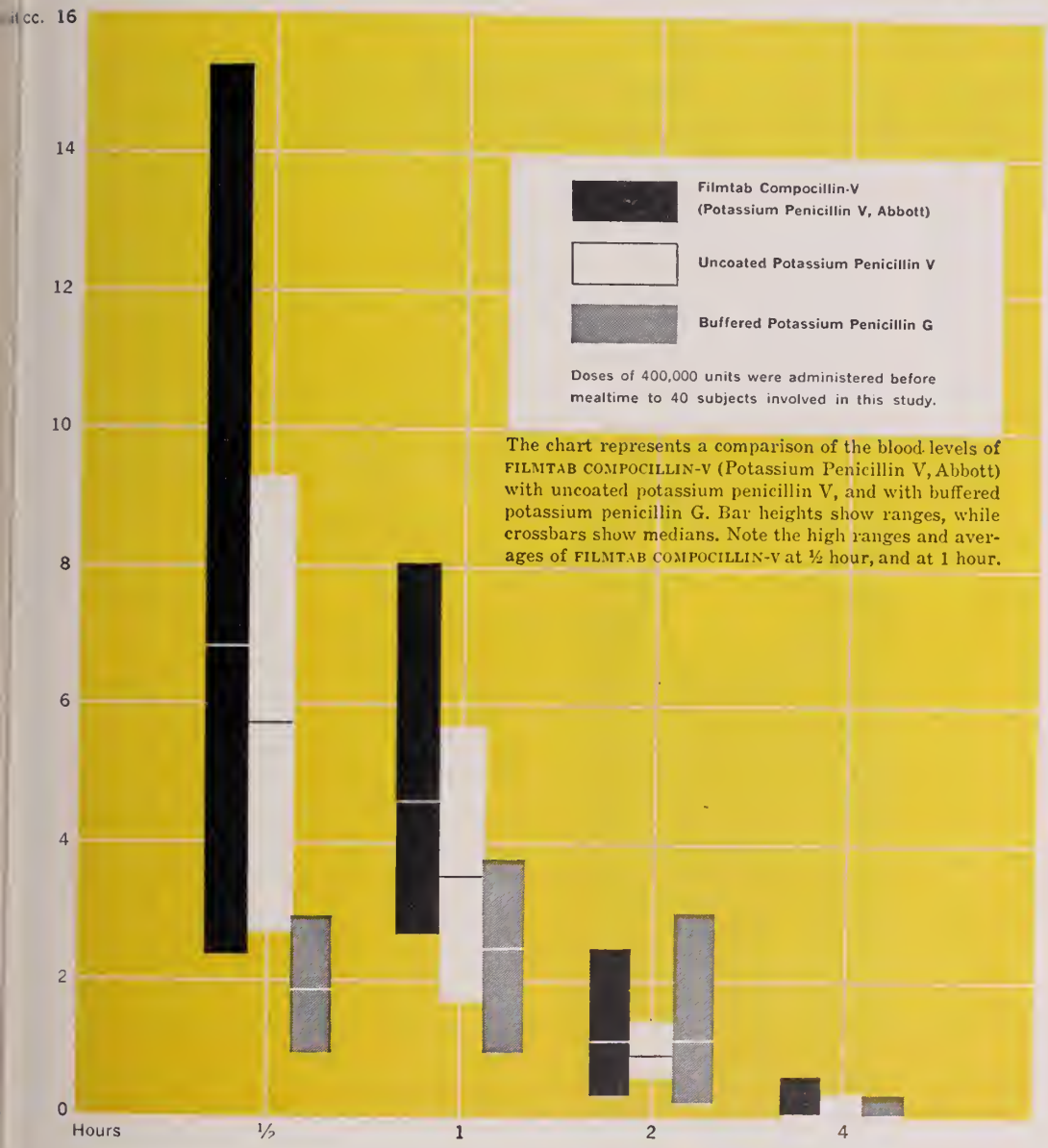
Dosage

Depending on the severity of the infection, 125 to 250 mg. (200,000 to 400,000 units) every four to six hours. For children, dosage is determined by age and weight.

Supplied

Filmtabs COMPOCILLIN-V (Potassium Penicillin V, Abbott) come in 125 mg. (200,000 units), bottles of 50; and in 250 mg. (400,000 units), bottles of 25. Oral Suspension COMPOCILLIN-V (Hydrabamine Penicillin V, Abbott), contains 180 mg. per 5-cc. teaspoonful, in 40-cc. and 80-cc. bottles.

THE HIGHER BLOOD LEVELS OF COMPOCILLIN-V
—IN EASY-TO-SWALLOW FILMTABS AND TASTY, ORAL SUSPENSION



The chart represents a comparison of the blood levels of FILMTAB COMPOCILLIN-V (Potassium Penicillin V, Abbott) with uncoated potassium penicillin V, and with buffered potassium penicillin G. Bar heights show ranges, while crossbars show medians. Note the high ranges and averages of FILMTAB COMPOCILLIN-V at ½ hour, and at 1 hour.

Now, with *Filmtab* COMPOCILLIN-V, patients get (and within minutes) fast, high penicillin concentrations. Note the blood level chart.

COMPOCILLIN-V is indicated whenever penicillin therapy is desired. It comes in two highly-acceptable forms. *Filmtab* COMPOCILLIN-V offers two therapeutic dosages (125 and 250 mg.). Patients find *Filmtabs* tasteless, odorless and easy-to-swallow. For children, COMPOCILLIN-V comes in a tasty, banana-flavored suspension. It's ready-mixed – stays stable for at least 18 months.

Abbott

Spontin®

(Ristocetin, Abbott)

and when coccal infections hospitalize the patient



Indications

SPONTIN is indicated for treating gram-positive bacterial infections. Clinical reports have indicated its effectiveness against a wide range of staphylococcal, streptococcal and pneumococcal infections. It can be considered a drug of choice for the immediate treatment of serious infections caused by organisms resistant to other antibiotics.

Dosage

Recommended dosage depends on the sensitivity of the microorganism and on the severity of the disease under treatment. For pneumococcal and streptococcal infections, a dosage of 25 mg./Kg. per day will usually be adequate. Majority of staphylococcal infections will be controlled by 25 to 50 mg./Kg. per day. However, in endocarditis due to relatively resistant strains or where vegetations or abscesses occur, dosages as high as 75 mg./Kg. per day may be used. It is recommended that the daily dosages be divided into two or three equal parts at eight- or twelve-hour intervals.

Supplied

SPONTIN is supplied as a sterile, lyophilized powder, in vials representing 500 mg. of ristocetin activity.

8C2070

A LIFESAVING ANTIBIOTIC AFTER OTHER ANTIBIOTICS HAD FAILED



SPONTIN comes to the medical profession with a clinical history of dramatic results – cases where the patients were given little chance of survival.

During these careful, clinical investigations, lives were saved after weeks (and sometimes months) of antibiotic failures. These were the cases where the infecting organisms had become resistant to present-day therapy. And, just as important, were the good results found against a wide range of gram-positive coccal infections.

Essentially, SPONTIN is a drug for hospital use, for patients with potentially dangerous infections. In its present form, SPONTIN is administered intravenously using the drip technique. Dosage may be dissolved in 5% dextrose in water or in any isotonic or hypotonic saline solution. Some of the important therapeutic points of SPONTIN include:

1. successful short-term therapy for acute or subacute endocarditis
2. new antimicrobial activity – no natural resistance to SPONTIN was found in tests involving hundreds of coccal strains
3. antimicrobial action against which resistance is rare – and extremely difficult to induce
4. bactericidal action at effective therapeutic dosages.

SPONTIN is truly a lifesaving antibiotic. It could save the life of one of your patients – does your hospital have it stocked?

Abbott

NOW...A NEW TREATMENT

'CARDILATE'*

for THE PROPHYLAXIS OF ANGINA PECTORIS

'Cardilate' tablets  shaped for easy retention in the buccal pouch

"... the degree of increase in exercise tolerance which sublingual erythrol tetranitrate permits, approximates that of nitroglycerin, amyl nitrite and octyl nitrite more closely than does any other of the approximately 100 preparations tested to date in this laboratory."

"Furthermore, the duration of this beneficial action is prolonged sufficiently to make this method of treatment of practical clinical value."

Riseman, J. E. F., Altman, G. E., and Koretsky, S.: Nitroglycerin and Other Nitrites in the Treatment of Angina Pectoris, Circulation (Jan.) 1958.

* "Cardilate" brand Erythrol Tetranitrate SUBLINGUAL TABLETS, 15 mg. scored



BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, New York



little

How to win friends ...



The Best Tasting Aspirin you can prescribe.

The Flavor Remains Stable down to the last tablet.

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We will be pleased to send samples on request.

THE BAYER COMPANY DIVISION of Sterling Drug Inc. 1450 Broadway, New York 18, N. Y.

NEW "Single-R

for



- Symptomatic relief of aches, pains, fever, coryza, and rhinorrhea associated with upper respiratory tract infections.
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Bristol LABORATORIES INC. SYRACUSE, NEW YORK

EDICATION

"lu," "grippe," "virus" and the common cold

Tetrex®-APC

with BRISTAMIN®

TETRACYCLINE PHOSPHATE COMPLEX WITH PHENYLTOLOXAMINE AND APC

Each TETREX-APC WITH BRISTAMIN Capsule contains:

A broad-spectrum antibiotic

TETREX (tetracycline phosphate complex) ..... 125 mg.
(tetracycline HCl activity)

An established analgesic-antipyretic combination

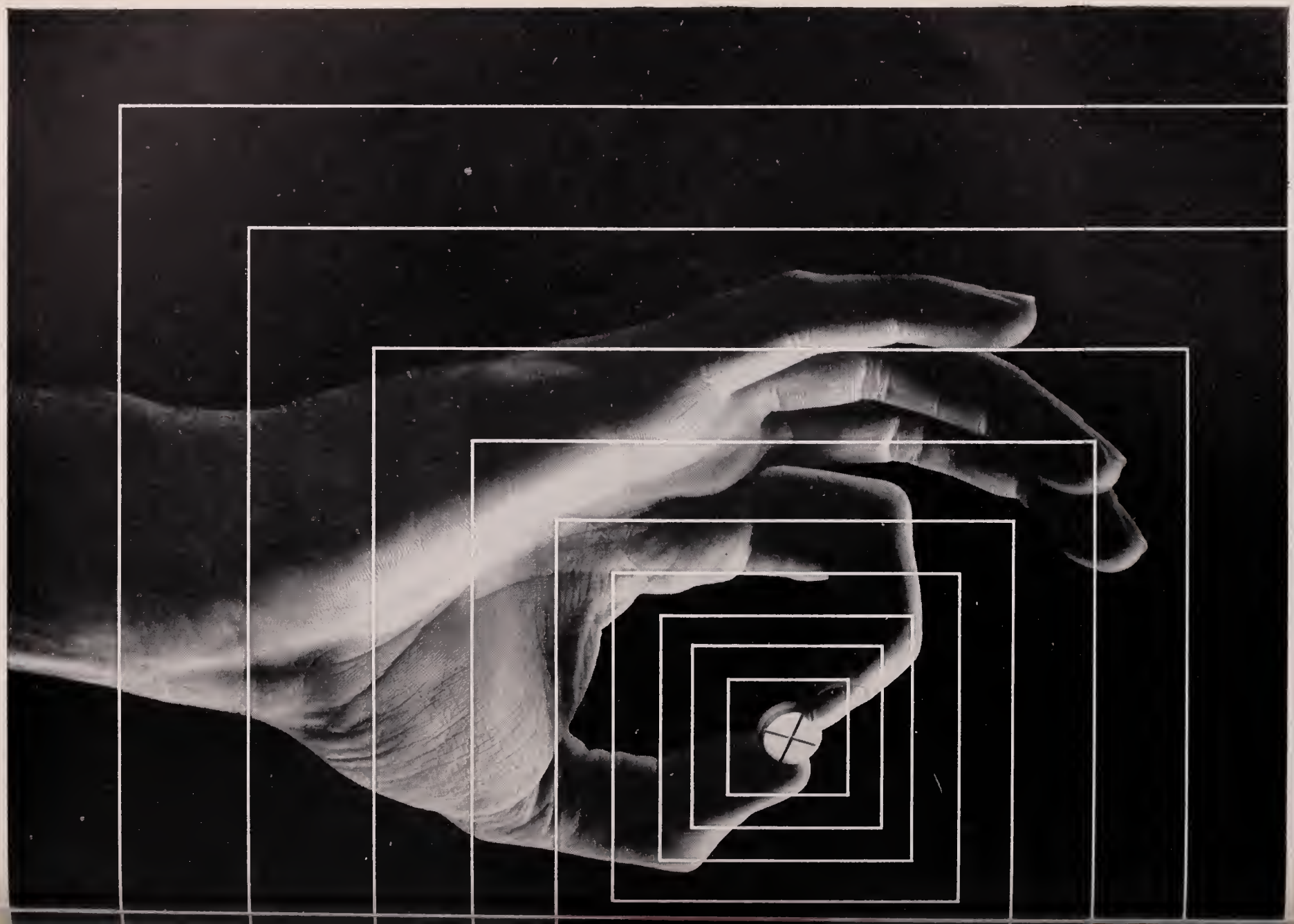
Aspirin ..... 150 mg.
Phenacetin ..... 120 mg.
Caffeine ..... 30 mg.

A dependable antihistamine

BRISTAMIN (phenyltoloxamine, Bristol) ..... 25 mg.

Dosage: *Adults:* 2 capsules at onset of symptoms, followed by 2 capsules 3 or 4 times a day for 3 to 5 days. *Children, 6 to 12 yrs.:* One-half adult dose.

Supplied: Bottles of 24 and 100 capsules.



a new era

in sulfa therapy

NLY ONE TABLET A DAY

KYNEX*

SULFAMETHOXYPYRIDAZINE (3-SULFANILAMIDO-6-METHOXYPYRIDAZINE) LEDERLE

New authoritative studies prove that KYNEX dosage can be reduced even further than that recommended earlier.[1] Now, clinical evidence has established that a single (0.5 Gm.) tablet maintains therapeutic blood levels extending beyond 24 hours. Still more proof that KYNEX stands alone in sulfa performance—

- Lowest Oral Dose In Sulfa History—0.5 Gm. (1 tablet) daily in the usual patient for maintenance of therapeutic blood levels
- Higher Solubility—effective blood concentrations within an hour or two
- Effective Antibacterial Range—exceptional effectiveness in urinary tract infections
- Convenience—the low dose of 0.5 Gm. (1 tablet) per day offers optimum convenience and acceptance to patients

NEW DOSAGE. The recommended adult dose is 1 Gm. (2 tablets or 4 teaspoonfuls of syrup) the first day, followed by 0.5 Gm. (1 tablet or 2 teaspoonfuls of syrup) every day thereafter, or 1 Gm. every other day for mild to moderate infections. In severe infections where prompt, high blood levels are indicated, the initial dose should be 2 Gm. followed by 0.5 Gm. every 24 hours. Dosage in children, according to weight; i.e., a 40 lb. child should receive ¼ of the adult dosage. It is recommended that these dosages not be exceeded.

TABLETS: Each tablet contains 0.5 Gm. (7½ grains) of sulfamethoxypyridazine. Bottles of 24 and 100 tablets.

SYRUP: Each teaspoonful (5 cc.) of caramel-flavored syrup contains 250 mg. of sulfamethoxypyridazine. Bottle of 4 fl. oz.

1. Nichols, R. L. and Finland, M.: *J. Clin. Med.* 49:410, 1957.

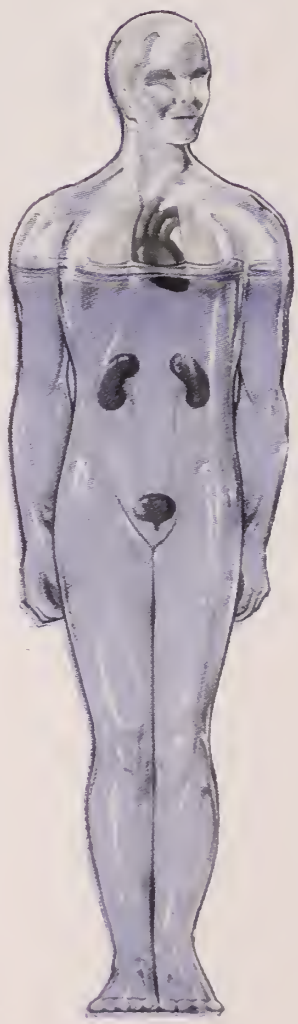
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* U. S. Pat. Off.

'DIURIL

(CHLOROTHIAZIDE

in

EDEMA



Start therapy with one or two 500 mg. tablets of 'DIURIL' once or twice a day.

BENEFITS:

- The only orally effective nonmercurial agent with diuretic activity equivalent to that of the parenteral mercurials.
- Excellent for initiating diuresis and maintaining the edema-free state for prolonged periods.
- Promotes balanced excretion of sodium and chloride—without acidosis.

Any indication for diuresis is an indication for 'DIURIL':

Congestive heart failure of all degrees of severity; premenstrual syndrome (edema); edema and toxemia of pregnancy; renal edema—nephrosis; nephritis; cirrhosis with ascites; drug-induced edema. May be of value to relieve fluid retention complicating obesity.

SUPPLIED: 250 mg. and 500 mg. scored tablets 'DIURIL' (chlorothiazide); bottles of 100 and 1,000.

'DIURIL' and 'INVERSINE' are trade-marks of Merck & Co., Inc.

MSD MERCK SHARP & DOHME
Division of MERCK & CO., Inc., Philadelphia 1, Pa.

as simple
as 1-2-3
in

HYPERTENSION



1 INITIATE 'DIURIL' THERAPY
'DIURIL' is given in a dosage range of from 250 mg. twice a day to 500 mg. three times a day.

2 ADJUST DOSAGE OF OTHER AGENTS
The dosage of other antihypertensive medication (reserpine, hydralazine, etc.) is adjusted as indicated by patient response. If the patient is established on a ganglionic blocking agent (e.g., 'INVERSINE') this should be continued, but the total daily dose should be *immediately* reduced by 25 to 50 per cent. This will reduce the serious side effects often observed with ganglionic blockade.

3 ADJUST DOSAGE OF ALL MEDICATION
The patient must be frequently observed and careful adjustment of all agents should be made to determine optimal maintenance dosage.

BENEFITS:

- improves and simplifies the management of hypertension
- markedly enhances the effects of antihypertensive agents
- reduces dosage requirements for other antihypertensive agents—often below the level of distressing side effects
- smooths out blood pressure fluctuations

INDICATIONS: management of hypertension

Smooth, more trouble-free management of hypertension with 'DIURIL'



when you encounter

- respiratory infections
- gastrointestinal infections
- genitourinary infections
- miscellaneous infections

for all tetracycline-amenable infections, prescribe superior

SUMYCIN

Squibb Tetracycline Phosphate Complex

In your patients, **SUMYCIN** *produces:*

1. Superior initial tetracycline blood levels—faster and higher than ever before—assuring fast transport of adequate tetracycline to the site of the infection.

2. High degree of freedom from annoying or therapy-interrupting side effects.

Supply:	*Tetracycline phosphate complex equiv. to tetracycline HCl (mg.)*	*Packaging:*
Sumycin Capsules (per Capsule)	250	Bottles of 16 and 100
Sumycin Suspension (per 5 cc.)	125	2 oz. bottles
Sumycin Pediatric Drops (per cc.—20 drops)	100	10 cc. dropper bottles

"SUMYCIN" IS A SQUIBB TRADEMARK

SQUIBB

Squibb Quality—
the Priceless Ingredient

How Old s Too Old or Tranquilizers

The psychological needs of the elderly confront physicians with one of their most perplexing problems. Perhaps no other patient group suffers so much from emotional distress. Yet, precisely because of their age, geriatric patients often seem beyond the reach of tranquilizing treatment.

When tranquilization seems risky . . .

They are too much beset by complicating chronic ailments, too susceptible to serious side effects. Ataraxia is clearly indicated, yet the doctor cannot risk side reactions on liver, blood or nervous system.

Is there an answer to this dilemma?

We feel there is. In four recent papers investigators have reported good results with ATARAX in patients up to 90 years of age.* In one study, **improvement was "pronounced" in 76%, "good" in an additional 18.5%.*** ATARAX has been successfully used in such cases as senile anxiety, agitation, hyperemotivity and persecution complex.* On ATARAX, patients became ". . . quieter and more manageable. They slept better and demonstrated improved relations with other patients and hospital personnel. Even their personal hygiene improved, and they required less supervisory management."*

. . . ATARAX is safe

Yet even in the aged, ATARAX has given "no evidence of toxicity. . . . Complete liver function tests and blood studies were made on all patients after two months of therapy. . . . There were no significant abnormalities."* With still other elderly patients "tolerance to the drug was excellent, even in cases where the patients were given relatively high doses."* Similarly, no parkinsonian effects have been observed on ATARAX therapy.

Nor does ATARAX make your patients want to sleep all day. Instead, they can better take care of themselves, because ATARAX leaves them both calm and alert. In sum, ATARAX ". . . does not impair psychic function and has a minimum of side effects. . . . It appears that ATARAX is a safe drug. . . ."*

These, undoubtedly, are the results you want when emotional problems beset your geriatric patients. For the next four weeks, won't you prescribe tiny ATARAX tablets or pleasant-tasting ATARAX syrup — both so readily acceptable to the elderly.

*Documentation on request

ATARAX®
(BRAND OF HYDROXYZINE)

M. A. Seidel M.D.
Medical Director

ROERIG Rx
New York 17, New York
Division, Chas. Pfizer & Co., Inc.

ITARAX

any
peremotive
ate

childhood behavior disorders
10 mg. tablets—3-6 years, one tablet t.i.d.; over 6 years, two tablets t.i.d. Syrup—3-6 years, one tsp. t.i.d.; over 6 years, two tsp. t.i.d.

adult tension and anxiety
25 mg. tablets—one tablet q.i.d. Syrup—one tbsp. q.i.d.

severe emotional disturbances
100 mg. tablets—one tablet t.i.d.

adult psychiatric and emotional ergencies
Parenteral Solution—25-50 mg. (1-2 cc.) intramuscularly, 3-4 times daily, at 4-hour intervals. Dosage for children under 12 not established.

pplied: Tablets, bottles of 100. Syrup, it bottles. Parenteral Solution, 10 cc. ultiple-dose vials.



If
Monilial overgrowth
is a factor

Achrostatin* V

TETRACYCLINE (PHOSPHATE-BUFFERED) AND NYSTATIN

Combines ACHROMYCIN V with NYSTATIN

SUPPLIED:

CAPSULES contain 250 mg. tetracycline HCl equivalent (phosphate-buffered) and 250,000 units Nystatin. ORAL SUSPENSION (cherry-mint flavored) Each 5 cc. teaspoonful contains 125 mg. tetracycline HCl equivalent (phosphate-buffered) and 125,000 units Nystatin.

DOSAGE:

Basic oral dosage (6-7 mg. per lb. body weight per day) in the average adult is 4 capsules or 8 tsp. of ACHROSTATIN V per day, equivalent to 1 Gm. of ACHROMYCIN V.

ACHROSTATIN V combines ACHROMYCIN† V ... the new rapid-acting oral form of ACHROMYCIN† Tetracycline ... noted for its outstanding effectiveness against more than 50 different infections ... and NYSTATIN ... the antifungal specific. ACHROSTATIN V provides particularly effective therapy for those patients prone to monilial overgrowth during a protracted course of antibiotic treatment.

LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, N. Y.
*Trademark †Reg. U. S. Pat. Off.

Lederle



"Since we've had him on NEOHYDRIN he can walk without dyspnea. I wouldn't have believed it possible a month ago."

oral
organomercurial
diuretic

TABLET
NEOHYDRIN®
BRAND OF CHLORMERODRIN

LAKESIDE

24658



A few suggestions on how to give your patient a diet he can "stick to"—

—and a glass of beer, at your discretion, for a morale-booster

The Low Calorie Diet

A diet that calls for lamb chops when they aren't on the restaurant menu is an invitation to "slip off." But a diet outline that lets your patient fill in the details provides incentive to stick to his diet.

He must remember that a candy bar equals a hamburger in calories only. An alternative must be equivalent in nutrition, too.

Fresh fruits or vegetables such as celery and radishes make good low-calorie nibbles. Spices and herbs, lemon and vinegar add zest with few or no calories.

Have your patient keep a calorie count. Then with a glass of beer* to brighten meals, he is more likely to follow a balanced diet later.

*104 Calories/8 oz. glass (Average of American Beers)

United States Brewers Foundation
Beer—America's Beverage of Moderation

If you'd like reprints of 12 special diets, please write United States Brewers Foundation, 535 Fifth Avenue, New York 17, N. Y.

Progress in SYNTHETIC CHEMISTRY
EQUALS
Progress in CHEMOTHERAPEUTICS

"It has a high degree of clinical safety. . . It is considered to be the preferred antimalarial drug for treatment of disorders of connective tissue, because of the low incidence of gastrointestinal distress as compared to that with chloroquine phosphate."[1]

". . . Plaquenil is decidedly less toxic and better tolerated by the average patient, even in high dosage, than is chloroquine."[2]

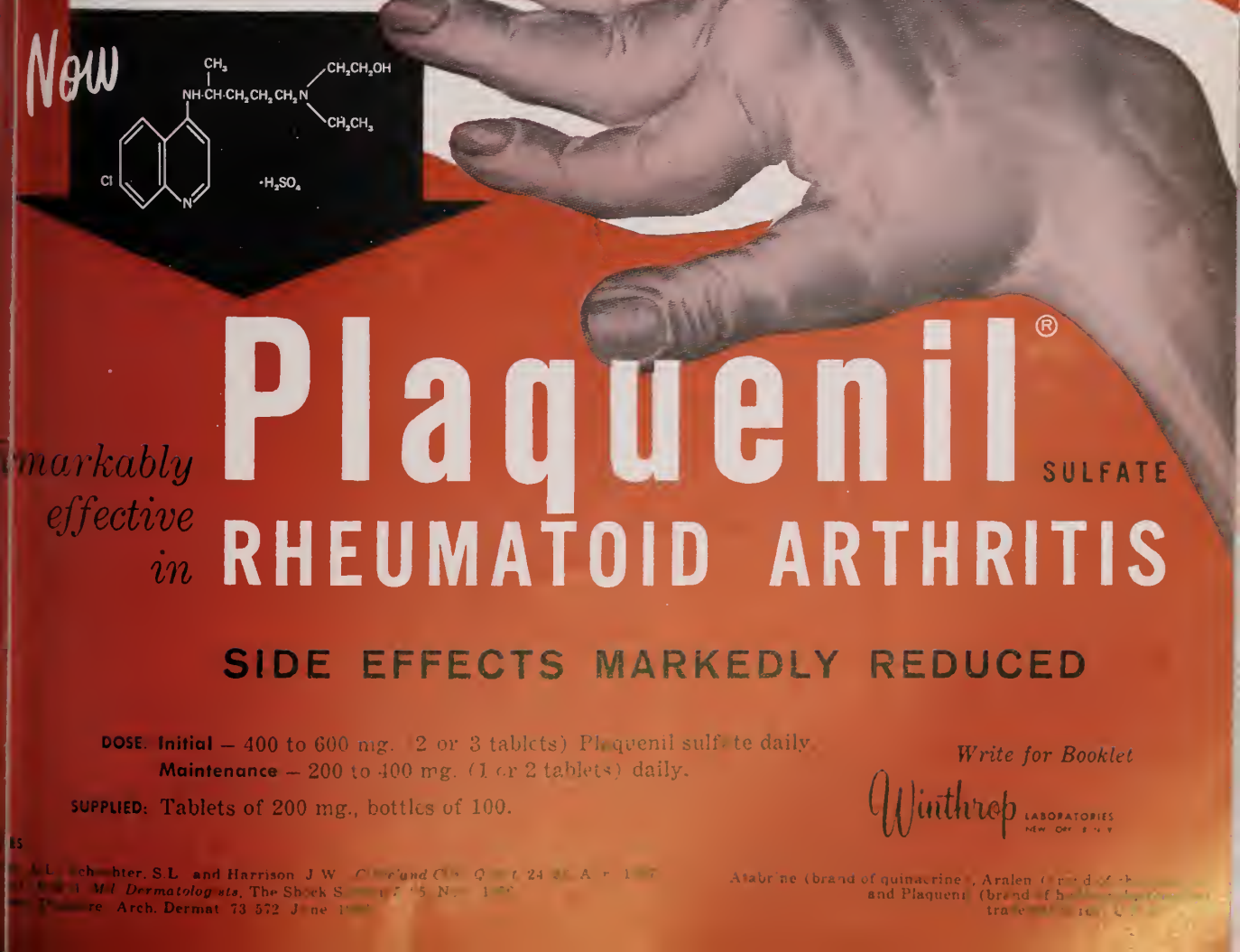
". . . the least toxic of its class . . ."[3]

QUININE

ATABRINE® DIHYDROCHLORIDE

ARALEN® PHOSPHATE

Now



Plaquenil® SULFATE

Markably effective in RHEUMATOID ARTHRITIS

SIDE EFFECTS MARKEDLY REDUCED

DOSE. Initial — 400 to 600 mg. (2 or 3 tablets) Plaquenil sulfate daily.
Maintenance — 200 to 400 mg. (1 or 2 tablets) daily.

SUPPLIED: Tablets of 200 mg., bottles of 100.

Write for Booklet

Winthrop LABORATORIES NEW YORK 18, N. Y.

1. Schamberg, S. L. and Harrison, J. W. ... and Harrison, J. W. *Mil. Dermatologists*, The Shock ... Arch. Dermat. 73: 572, June ...

Atabrine (brand of quinacrine), Aralen (brand of ...) and Plaquenil (brand of ...) trade ...

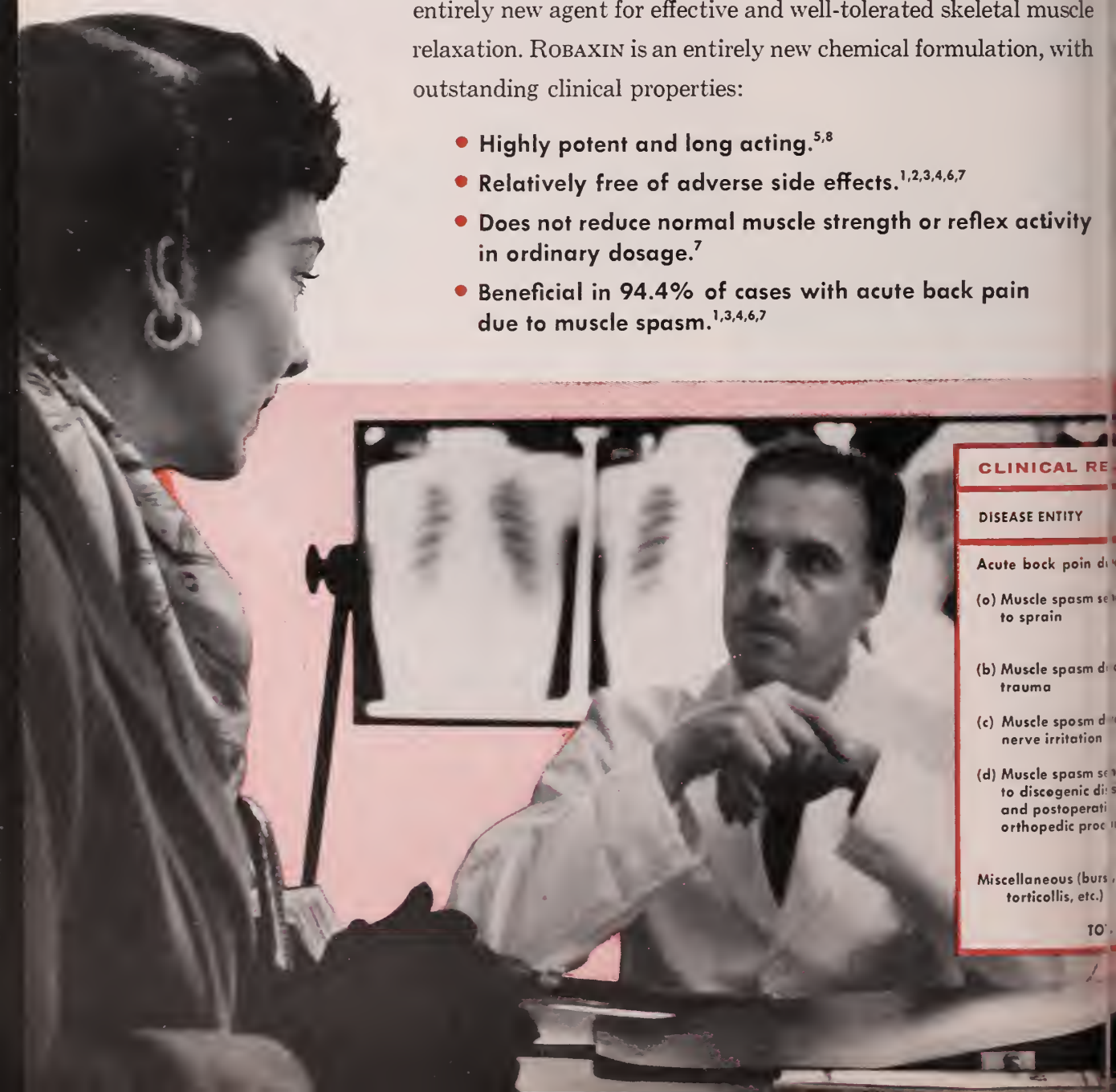
Significant Robins research discovery:

A NEW SKELETAL MUSCLE RELAXANT

Ro

ROBAXIN – synthesized in the Robins Research Laboratories, and intensively studied for five years – introduces to the physician an entirely new agent for effective and well-tolerated skeletal muscle relaxation. ROBAXIN is an entirely new chemical formulation, with outstanding clinical properties:

- **Highly potent and long acting.**[5,8]
- **Relatively free of adverse side effects.**[1,2,3,4,6,7]
- **Does not reduce normal muscle strength or reflex activity in ordinary dosage.**[7]
- **Beneficial in 94.4% of cases with acute back pain due to muscle spasm.**[1,3,4,6,7]





baxin®

(Methocarbamol Robins, U.S. Pat. No. 2770649)

Highly specific action

ROBAXIN is highly specific in its action on the internuncial neurons of the spinal cord – with inherently sustained repression of multisynaptic reflexes, but with no demonstrable effect on monosynaptic reflexes. It thus is useful in the control of skeletal muscle spasm, tremor and other manifestations of hyperactivity, as well as the pain incident to spasm, without impairing strength or normal neuromuscular function.

Beneficial in 94.4% of cases tested

When tested in 72 patients with acute back pain involving muscle spasm, ROBAXIN induced marked relief in 59, moderate relief in 6, and slight relief in 3 – or an over-all beneficial effect in 94.4%.[1,3,4,6,7] No side effects occurred in 64 of the patients, and only slight side effects in 8. In studies of 129 patients, moderate or negligible side effects occurred in only 6.2%.[1,2,3,4,6,7]

OBAXIN IN ACUTE BACK PAIN[1,3,4,6,7]

IRATION OF EATMENT	DOSE PER DAY (divided)	RESPONSE marked	mod.	slight	neg.	SIDE EFFECTS
12 days	3-6 Gm.	17	1	0	0	None, 16 Dizziness, 1 Slight nausea, 1
12 days	2-6 Gm.	8	1	3	1	None, 12 Nervousness, 1
240 days	2.25-6 Gm.	4	1	0	0	None, 5
28 days	1.5-9 Gm.	24	3	0	3	None, 25 Dizziness, 1 Lightheadedness, 2 Nausea, 2 *
30 days	4-8 Gm.	6	0	0	0	None, 6
		59	6	3	4	* Relieved on reduction of dose

References: 1. Carpenter, E. B.: Publication pending. 2. Carter, C. H.: Personal communication. 3. Forsyth, H. F.: Publication pending. 4. Freund, J.: Personal communication. 5. Morgan, A. M., Truitt, E. B., Jr., and Little, J. M.: American Pharm. Assn. 46:374, 1957. 6. Nachman, H. M.: Personal communication. 7. O'Doherty, D.: Publication pending. 8. Truitt, E. B., Jr., and Little, J. M.: J. Pharm. & Exper. Therap. 119:161, 1957.

Indications – Acute back pain associated with: (a) muscle spasm secondary to sprain; (b) muscle spasm due to trauma; (c) muscle spasm due to nerve irritation; (d) muscle spasm secondary to discogenic disease and postoperative orthopedic procedures; and miscellaneous conditions, such as bursitis, fibrositis, torticollis, etc.

Dosage – *Adults:* Two tablets 4 times daily to 3 tablets every 4 hours. Total daily dosage: 4 to 9 Gm. in divided doses.

Precautions – There are no specific contraindications to Robaxin and untoward reactions are not to be anticipated. Minor side effects such as lightheadedness, dizziness, nausea may occur rarely in patients with unusual sensitivity to drugs, but disappear on reduction of dosage. When therapy is prolonged routine white blood cell counts should be made since some decrease was noted in 3 patients out of a group of 72 who had received the drug for periods of 30 days or longer.

Supply – Robaxin Tablets, 0.5 Gm., in bottles of 50.

A. H. ROBINS CO., INC., Richmond 20, Va.
Ethical Pharmaceuticals of Merit since 1878



IN ALL DIARRHEAS . . . REGARDLESS OF ETIOLOGY

comprehensive control with **CREMOMYCIN**®

SULFASUXIDINE* PECTIN-KAOLIN-NEOMYCIN SUSPENSION

SOOTHING ACTION . . . Kaolin and pectin coat and soothe the inflamed mucosa, adsorb toxins and help reduce intestinal hypermotility.

BROAD THERAPY . . . The combined antibacterial effectiveness of neomycin and Sulfasuxidine is concentrated in the bowel since the absorption of both agents is negligible.

LOCAL IRRITATION IS REDUCED and control is instituted against spread of infective organisms and loss of body fluid.

PALATABLE creamy pink, fruit-flavored CREMOMYCIN is pleasant tasting, readily accepted by patients of all ages.

*Sulfasuxidine is a trade-mark of Merck & Co., Inc.

MSD MERCK SHARP & DOHME
DIVISION OF MERCK & CO., INC., PHILADELPHIA 1, PA.

MY DAD— HE HURT HIS BACK REAL BAD

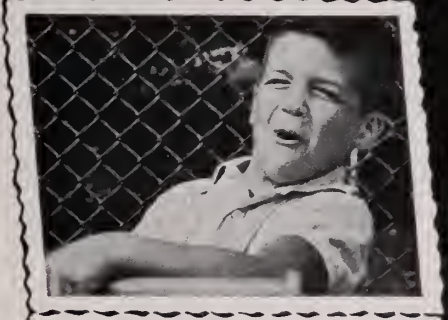
"It happened at work while he was putting oil in something"



"He told Mom his shoulder felt like it was on fire"



"He couldn't swing a bat without hurting"



"But Doctor gave him some nice pills--and the pain went away fast"



"Dad said we'd play ball again tomorrow when he comes home"



AND THE PAIN WENT AWAY FAST

FOR PAIN

Percodan®

(Salts of Dihydrohydroxycodeinone and Homatropine, plus APC) **TABLETS**

ACTS FASTER...
usually within 5-15 minutes

LASTS LONGER...
usually for 6 hours or more

MORE THOROUGH RELIEF...
permits uninterrupted sleep through the night

RARELY CONSTIPATES...
excellent for chronic or bedridden patients

and now... **NEW**

Percodan®-Demi

VERSATILE

New "demi" strength permits dosage flexibility to meet each patient's specific needs. PERCODAN-DEMI provides the PERCODAN formula with one-half the amount of salts of dihydrohydroxycodeinone and homatropine.

AVERAGE ADULT DOSE: 1 tablet every 6 hours. May be habit-forming. Available through all pharmacies.

Each PERCODAN* Tablet contains 4.50 mg. dihydrohydroxycodeinone hydrochloride, 0.38 mg. dihydrohydroxycodeinone terephthalate, 0.38 mg. homatropine terephthalate, 224 mg. acetylsalicylic acid, 160 mg. phenacetin, and 32 mg. caffeine.

Literature? Write

Endo® **ENDO LABORATORIES**
Richmond Hill 18, New York

*U.S. Pat. 2,628,185



there's pain and inflammation here... it could be mild or severe, acute or chronic, primary or secondary fibrositis—or even early rheumatoid arthritis

more potent and comprehensive treatment than salicylate alone

. . . assured anti-inflammatory effect of low-dosage corticosteroid[1]

. . . additive antirheumatic action of corticosteroid plus salicylate[2-5] brings rapid pain relief; aids restoration of function.

. . . wide range of applicati including the entire fibrositis syndrome as well as early or mild rheumatoid arthritis

more manageable corticosteroid dosag

. . . much less likelihood of treatment-interrupti side effects[1-6]

. . . simple, flexible dosage schedule



in any case
it calls for

Sigmagen®

corticoid-salicylate compound

tablets

Composition

METICORTEN® (prednisone)	0.75 mg.
Acetylsalicylic acid	325 mg.
Aluminum hydroxide	75 mg.
Ascorbic acid	20 mg.

Packaging: SIGMAGEN Tablets, bottles of 100 and 1000.

References: 1. Spies, T. D., et al.: J.A.M.A. 159:645, 1955. 2. Spies, T. D., et al.: Postgrad. Med. 17:1, 1955. 3. Gelli, G., and Della Santa, L.: Minerva Pediat. 7:1456, 1955. 4. Guerra, F.: Fed. Proc. 12:326, 1953. 5. Busse, E. A.: Clin. Med. 2:1105, 1955. 6. Sticker, R. B.: Panel Discussion, Ohio State M. J. 52:1037, 1956.

SCHERING CORPORATION • BLOOMFIELD, N. J.

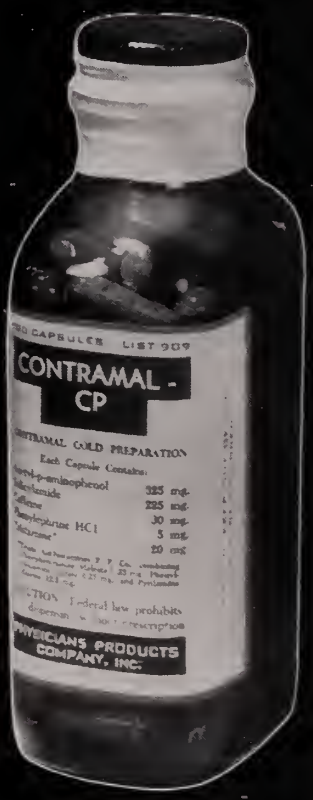
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Schering

te conditions: Two or three
ets four times daily. After
red response is obtained,
lually reduce daily dosage
then discontinue.
acute or chronic conditions:
ally as above. When satisfactory
rol is obtained, gradually reduce
daily dosage to minimum
ctive maintenance level. For best
ilts administer after meals and
edtime.
cautions: Because SIGMAGEN
ains prednisone, the
e precautions and
traindications observed
this steroid apply also
he use of SIGMAGEN.

to more completely control the symptoms of the common cold





Contramal-CP

For your patients suffering from colds, respiratory disorders and allergic states, you will find CONTRAMAL-CP an orally effective DECONGESTANT, ANALGESIC, ANTIPYRETIC and ANTIHISTAMINIC. The inclusion of Tristamine* and Phenylephrine Hydrochloride with the basic CONTRAMAL formula is designed to provide ... MORE complete control of the common cold!

**Tristamine...(triple-Antihistamines) by Physicians Products Company contains Chlorpheniramine Maleate 1.25 mg., Phenyltoloxamine Citrate 6.25 mg., and Pyrilamine Maleate 12.5. mg.*

CONTRAMAL-CP . . . each orange capsule contains:

Acetyl-p-aminophenol	325 mg.
Salicylamide	225 mg.
Caffeine	30 mg.
Phenylephrine Hydrochloride	5 mg.
Tristamine*	20 mg.

Supplied—bottles 100 and 1000 capsules

PHYSICIANS PRODUCTS CO., INC.
PETERSBURG, VIRGINIA
2961

CLINICAL SAMPLES GLADLY SENT UPON REQUEST

A NEW, CORTICOSTEROID MOLECULE WITH GREATER ANTIALLERGIC, ANTIRHEUMATIC AND ANTI-INFLAMMATORY ACTIVITY



for your patients with

- BRONCHIAL ASTHMA, ALLERGIC DISORDERS
- ARTHRITIC DISORDERS
- DERMATOSES

Squibb Triamcinolone

KENACORT

- far less gastrointestinal distress
- safe to use in asthma with associated cardiac disease; no sodium and water retention
- does not produce secondary hypertension—low salt diet not necessary
- no unnatural psychic stimulation
- often works when other glucocorticoids have failed
- and on a lower daily dosage range

SQUIBB

Initial dosage: 8 to 20 mg. daily. After 2 to 7 days gradually reduce to maintenance levels.
See package insert for specific dosages and precautions.
1 mg. tablets, bottles of 50 and 500.
4 mg. tablets, bottles of 30 and 100.

CENTENNIAL 1858 1958 SQUIBB

Squibb Quality—the Priceless Ingredient

"KENACORT" IS A SQUIBB TRADEMARK

RELIEF 1 2





FROM INFECTION*

FROM IRRITATION

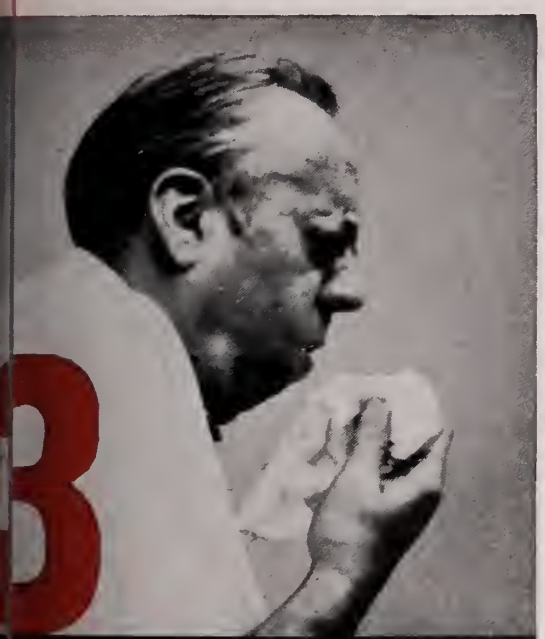
*as adjunctive therapy only

THE FIRST TROCHE TO PROVIDE THREEFOLD BENEFITS

'PENTAZETS'

TROCHES

NON-NARCOTIC ANTITUSSIVE EFFICACY SHOWN TO APPROXIMATE THAT OF CODEINE



NOW COUGH CONTROL TOO

With the addition of a non-narcotic antitussive to troche medication, 'PENTAZETS' provides a new and extended therapeutic advantage in this convenient form of treatment.

Treatment of the cough too, so often a troublesome symptom of sore throat, combined with wide-range antibiotic activity and soothing analgesic benefit, now offers *three*fold relief in a variety of throat irritations.

And 'PENTAZETS' are pleasant-tasting, too, making them highly acceptable, especially to children.

'PENTAZETS' contains:

• *Homarylamine*—a new non-narcotic antitussive with cough control shown to approximate that of codeine. • *Bacitracin-Tyrothricin-Neomycin*—a combined antibiotic treatment against many pathogenic organisms with little danger of unfavorable side effects. • *Benzocaine*—a local anesthetic for soothing relief to inflamed tissues. Being slowly absorbed, it is especially beneficial for prolonged effect and benefit to surrounding areas.

Supplied: Vials of 12.

Each 'PENTAZETS' troche contains:

Homarylamine hydrochloride	20 mg.
Zinc Bacitracin	50 units
Tyrothricin	1 mg.
Neomycin sulfate (equivalent to 3.5 mg. neomycin base)	5 mg.
Benzocaine	5 mg.



MSD

MERCK SHARP & DOHME

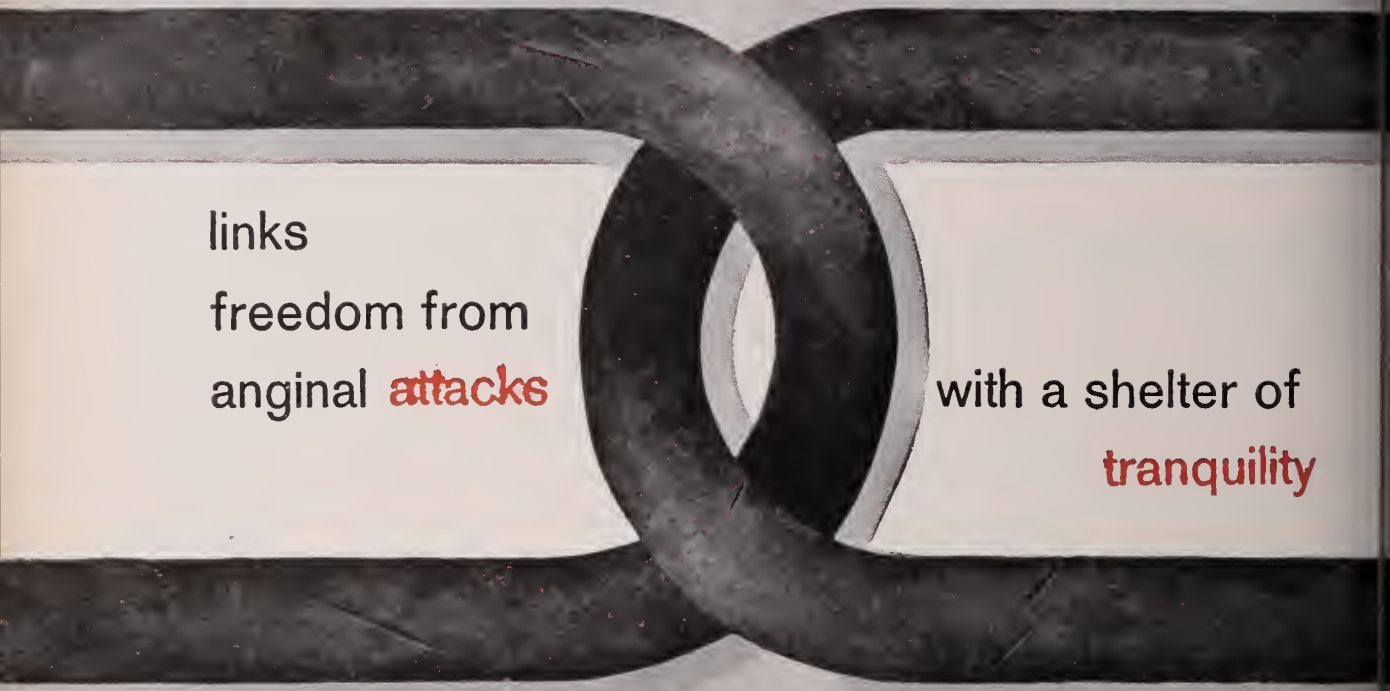
DIVISION OF MERCK & CO., INC., PHILADELPHIA 1, PA.

PENTAZETS is a trademark of Merck & Co., Inc.

new for angina

PETN + ATARAX®
(PENTAERYTHRITOL TETRANITRATE) (HYDROXYZINE)

CARTRAX*



links
freedom from
anginal attacks
with a shelter of
tranquility

In pain. Anxious. Fearful. On the road to cardiac invalidism. These are the pathways of angina patients. For fear and pain are inexorably linked in the angina syndrome.

For angina patients—perhaps the next one who enters your office—won't you consider new CARTRAX? This doubly effective therapy combines PETN (pentaerythritol tetranitrate) for lasting vasodilation and ATARAX for peace of mind. Thus CARTRAX relieves not only the anginal pain but reduces the concomitant anxiety.

Dosage and supplied: begin with 1 to 2 yellow CARTRAX "10" tablets (10 mg. PETN plus 10 mg. ATARAX) 3 to 4 times daily. When indicated, this may be increased for more optimal effect by switching to pink CARTRAX "20" tablets (20 mg. PETN plus 10 mg. ATARAX.) For convenience, write "CARTRAX 10" or "CARTRAX 20." In bottles of 100. CARTRAX should be taken 30 to 60 minutes *before* meals, on a continuous dosage schedule. Use PETN preparations with caution in glaucoma.

"Cardiac patients who show significant manifestations of anxiety should receive ataractic treatment as part of the therapeutic approach to the cardiac problem."[1]

1. Waldman, S., and Pelner, L.: Am. Pract. & Digest Treat. *8*:1075 (July) 1957.

*TRADEMARK

Rx PFIZER

New York 17, New York
Division, Chas. Pfizer & Co., Inc.

a new high in
anti-inflammatory effects
with lower dosage
(averages 1/3 less than
prednisone)

The
Achievements
of

Aristocort®

Triamcinolone LEDERLE

a new low in the collateral
hormonal effects associated
with all previous corticosteroids

- No sodium or water retention
- No potassium loss
- No interference with psychic equilibrium
- Low incidence of peptic ulcer and osteoporosis

Aristocort is available in 2 mg. scored tablets (pink), bottles of 30; and 4 mg. scored tablets (white), bottles of 30 and 100.

Lederle

The Achievement in Skin Diseases: In a study of 26 patients with severe dermatoses, ARISTOCORT was proved to have potent anti-inflammatory and antipruritic properties, even at a dosage only ⅔ that of prednisone.[1]... Striking affinity for skin and tremendous potency in controlling skin disease, including 50 cases of psoriasis, of which over 60% were reported as *markedly improved*[2]... absence of serious side effects specifically noted.[1,2,3]

The Achievement in Rheumatoid Arthritis: Impressive therapeutic effect in most cases of a group of 89 patients[4]...6 mg. of ARISTOCORT corresponded in effect to 10 mg. of prednisone daily (in addition, gastric ulcer which developed during prednisone therapy in 2 cases disappeared during ARISTOCORT therapy).[5]

Aris

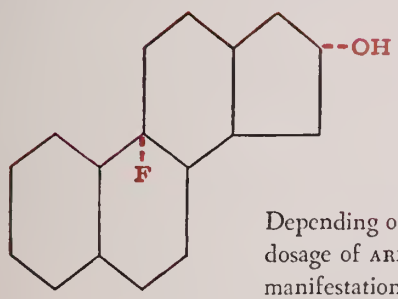
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2. Shelley, W. B., and Pillsbury, D. M.: Personal Communication.
3. Sherwood, A., and Cooke, R. A.: Personal Communication.
4. Freyberg, R. H., Berntsen, C. A., and Hellman, L.: Paper presented at International Congress on Rheumatic Diseases, Toronto, June 25, 1957.
5. Hartung, E. F.: Personal Communication.
6. Schwartz, E.: Personal Communication.
7. Sherwood, A., and Cooke, R. A.: J. Allergy 28:97, 1957.
8. Hellman, L., Zumoff, B., Kretshmer, N., and Kramer, B.: Paper presented at Nephrosis Conference, Bethesda, Md., Oct. 26, 1957.
9. Ibid.: Personal Communication.
10. Barach, A. L.: Personal Communication.
11. Segal, M. S.: Personal Communication.
12. Cooke, R. A.: Personal Communication.
13. Dubois, E. L.: Personal Communication.

The Achievement in Respiratory Allergies: "Good to excellent" results in 29 of 30 patients with chronic intractable bronchial asthma at an average daily dosage of only 7 mg.[6]... Average dosage of 6 mg. daily to control asthma and 2 to 6 mg. to control allergic rhinitis in a group of 42 patients, with an actual reduction of blood pressure in 12 of these.[7]

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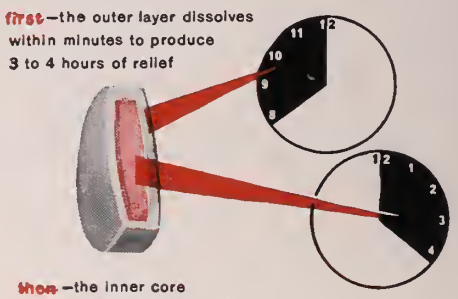
*Morrison, L. F.: Arch. Otolaryng. 59:48-53 (Jan.) 1954.

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Guest Editorial . . . .

Medical Program of the U.M.W.A. Welfare and Retirement Fund

NINE YEARS AGO the United Mine Workers Welfare Fund embarked upon the largest medical care program of its kind that had ever been established. The purpose was to provide the highest quality of medical care obtainable for about a million miners and their families for most of whom the lack of adequate medical services had been distressing.

The administration of the medical program was entrusted to physicians who believed that organized medicine would help the Fund in fulfilling its purpose, and who sought the cooperation of its members at the national, state and local levels, from the outset. Liaison committees were appointed and much was done to find a satisfactory solution of problems of mutual concern.

As data accumulated, however, it became evident that the hospitalization rates and length of hospital stay of Fund beneficiaries were excessive, and that surgical diagnoses and operative surgery in many instances left much to be desired. These facts were discussed with individual physicians and state and local medical societies over a period of several years, and corrective measures were sought, but little or no improvement resulted.

In consequence, the Fund adopted a provision that all its beneficiary patients would be seen in consultation with an appropriate specialist to consider the necessity of hospitalization. This reduced the rate of hospital admissions by as much as thirty, and in some cases fifty per cent. It was bitterly opposed by the medical societies of several states, however, and was largely discontinued in the face of disapproval of the House of Delegates of the A.M.A., June, 1955.

Following this, an agreement on measures for resolving difficulties was worked out between the Medical Service of the Fund and the Board of Trustees of the Medical Society of the State of Pennsylvania. This seemed to hold great promise and met with editorial commendation by the Journal of the A.M.A. Within a few months, however, it was declared "null and void, terminated and ended" by action of the House

of Delegates of the Pennsylvania Society. No warning was given and no reasons were stated.

Failing in its efforts to insure a satisfactory quality of medical care by the foregoing measures, the Fund decided to give preference, as far as practicable, to physicians who were certified as surgeons, rather than make payment to physicians whose qualifications for surgery it was not in position to judge. This likewise resulted in a storm of medical society protest and retaliation.

The Executive Medical Officer of the Fund then requested the A.M.A. Committee on Medical Care for Industrial Workers to lend its good offices to finding some way of assuring high quality medical care to Fund beneficiaries that would be mutually satisfactory.

The Committee responded by devising "Suggested Guides" which inform the Fund, in effect, that it should assume that every physician, if he claims to be, is competent to perform any service that a beneficiary may require unless his "peers" consider otherwise, and that the Fund should pay any hospital that a beneficiary might select for any quality of service it might render. This is precisely the policy the Fund adopted at the outset and which it cannot continue for the reasons stated.

We know from our nine years of experience that the best quality of medical care obtainable for Fund beneficiaries would not be achieved by acceptance of provisions such as these. On the contrary, we are led to the conclusion that quality of service and conservation of resources may best be assured by utilizing the services only of physicians and hospitals we have found are necessary and essential.

It is our earnest desire to continue the friendly understanding and cooperative relationship which have always existed with the fair-minded members of the medical profession who know the spirit and intent with which our program has been conceived and carried out.

WARREN F. DRAPER, M.D.

Editor's Note: Dr. Draper was formerly State Health Commissioner of Virginia. He is now Executive Medical Officer of the United Mine Workers of America Welfare and Retirement Fund. We are glad to give him a chance to present his side of this controversial subject.

Tranquilizers
Uses and Abuses

JAMES ASA SHIELD, M.D.
Richmond, Virginia

THE SUBJECT we are to discuss has become as common as comment on the weather whenever two people meet. The tranquilizers have been all but advertised like a patent medicine. Each lay publication has vied with the other in bringing the latest "medical" facts about the tranquilizers to the public's attention, and we doctors have been hard-pressed to keep up with our patients' growing fund of half-knowledge.

Perhaps this is the "Age of Anxiety" as it has been called or perhaps mass communication methods have made it possible for us to be more aware of the extent and scope of anxiety. However that may be the need to calm the nerves or to stimulate them is not new to our age. It is probably as old as man himself.

The problem we are faced with is the wide acceptance and misuse of drugs as well as their appropriate uses. The doctor is in a position now to treat his patient as a puppeteer toys with a puppet. He can stimulate him in the morning to face the everyday trials, calm him down for lunch, give him a pick-up for the afternoon and settle him down again for sleep. This isn't just cartoon-fodder. The danger lies in our treating and relieving the symptoms while allowing the cause to rest secure to raise its head another day.

What are these tranquilizers? The so-called tranquilizers are drugs which reduce anxiety, nervous tension, and muscular tension. They are sedatives in a way but their actions and reactions are entirely different from the older sedatives such as the barbiturates and bromides. This represents an advance in medicine since the old sedatives left a hang-over more marked than any seen with the use of tranquilizers, and at the same time it makes the abuse of the tranquilizers more apt.

The use of tranquilizers to sooth normal healthy anxiety is both wrong and poor medicine. I believe most doctors today explain to the patient who requests sedatives and/or tranquilizers because of normal unhappy reactions or anxiety that it is better not to use sedatives or tranquilizers. Next, I believe to use the Chlorpromazine (Thorazine) group for simple anxiety is using too powerful and risky a drug for a minor complaint. Thorazine, I know, has at times very much disturbed some patients and treatment-produced symptoms have been worse than the initial complaints.

It is usually the fear or concern of not understanding the reason for one's pain, weakness, swelling, etc., that makes the patient call the doctor. In turn, the patient wants cure. He wants his symptoms relieved, organic and/or functional.

Every good doctor in his respective field treats the anxiety created by the patient's complaint along with the complaint itself. At times the doctor finds that for this reason or that. the patient's whole problem is his anxiety alone. Thus the doctor awarely or unawarely treats the emotion of apprehension and anxiety.

How much medicine is being used by doctors? In order to be helpful to their patients, it is estimated that there were 585,220.000 prescriptions written by the medical profession in 1956, the last available figure. This is roughly 3 plus prescriptions per individual in the United States. This does not account for much of the medicine ordered for the 22 million patients admitted to hospitals and treated with medicines in 1956.

According to independent audits, the following are the ten most widely prescribed prescription items for the first six months of 1957:

1. Achromycin—Broad Spectrum Antibiotics, Lederle
2. Empirin Compound—Analgesic, Burroughs-Wellcome
3. Gantrisin—Sulfonamide, Hoffmann-LaRoche
4. Equanil—Tranquilizer, Wyeth
5. Chlor-Trimeton—Antihistaminic, Schering
6. Donnatal—Antispasmodic & Sedative, Robins
7. Demerol—Analgesic, Winthrop Labs.
8. Phenaphen—Analgesic-Sedative, Robins
9. Chloromycetin—Broad Spectrum Antibiotic, Parke, Davis
10. Seconal Sodium—Barbiturate Sedative, Hypnotic, Lilly

JAMES ASA SHIELD, M.D., *Staff, Tucker Hospital, Richmond, Virginia.*

Any prescription given a patient to allay his agitation by replacing his emotion of anxiety with a feeling of comfort and peace is a tranquilizer. However in today's discussion we shall limit our topic to some of the so-called newer drugs:

(1) The Phenothiazine Group: Thorazine (Chlorpromazine), Sparine (Promazine), Compazine (Proclorperazine); Trilafon (Perhenazine), Pacatal (Mepazine) Vesprin
(2) Reserpine Group: Serpasil
(3) Meprobamate: Miltown, Equanil
(4) Phenaglycoclol: Ultran
(5) Hydroxyzine: Atarax

"The development of tranquilizers (as such) may be said to have begun as far back as 1883, for in that year Bernthsen, in studying alternate methods of synthesizing methylene blue, prepared its parent compound, phenothiazine. In 1891, Guttman and Ehrlich reported that methylene blue was an effective chemotherapeutic agent against human malaria. Subsequent studies by other investigators of methylene and related compounds led to the development of Pamaquine and other synthetic antimalarial drugs. Little interest was shown in phenothiazine, however, prior to 1940 when it was reported by Taylor and Sanderson to possess anthelmintic properties, useful in veterinary medicine.

"A few years later, study of the amine derivatives of phenothiazine began almost simultaneously in France and in the United States. Study of these compounds was almost abandoned by these early investigators in the United States after they were shown to be practically devoid of antimalarial, trypanocidal or anthelmintic activity. Such study continued, however, in France. Within a relatively short time, various amine derivatives of phenothiazine were reported to possess antihistaminic and vagal ganglioblocking activity as well as to be useful in the treatment of Parkinsonism. Meanwhile with the report by Winter that dimethylaminopropyl phenothiazine prolonged the sleep-producing effects of hexobarbital and confirmation of his findings by Laborit and others, interest developed in the usefulness of this and related compounds, as adjuncts in anesthesiology, as well as in other fields of medicine. In 1950, a systematic search was begun at the Rhone-Poulenc Research Laboratories to discover other compounds in this same chemical series which might possess clinical usefulness. Among the many compounds developed, chlorpromazine was selected for intensive pharmacologic study.

"The introduction of chlorpromazine in Europe was followed by reports by Laborit and his coworkers as well as by Forster and others of its usefulness in presurgical anesthesia. During such use the tranquilizing effect of chlorpromazine was observed. Delay and his associates were the first to use chlorpromazine as the sole medication in psychotic patients. They reported that it controlled psychomotor excitement in a high percentage of the patients treated. In 1954, Lehmann and Hanrahan reported that chlorpromazine had unique value in the symptomatic control of severe psychomotor excitement and that impressive therapeutic results were achieved in mania particularly."[1]

As stated above, it is anxiety about his complaint that sends the patient to the physician seeking rational therapy which can only follow diagnosis. Interpretation of the pathology organic and/or functional determines treatment, and determines whether the prescription will contain a tranquilizer. The patient who has an excessive amount of anxiety about his illness may need one type of tranquilizer. Another patient with somatic anxiety as a symptom of a psychosis may need another type of tranquilizer.

Thus, diagnostic understanding of the patient is the first *must* and the *way, where* and *how* the drug will act on this patient is the second must for successful therapy. The purpose of this discussion is to try to bring together the studies, observations and opinions of others in light of our experience with the tranquilizers in treating patients in the office or hospital. The patients we have treated are for the most part similar to ones you daily see, except that they have not responded to therapy satisfactorily for some reason, environmental or otherwise, and for this reason have been referred to us.

There has been development of the tranquilizer, as this term is used in its limited sense to refer to the rauwolfia group, the phenothiazine group and to Miltown, Equanil, Ultran, Atarax, and others since 1953.

Reserpine (Serpasil) was introduced as a tranquilizer and anti-hypertensive in 1953. Its use was expanded to include psychiatric conditions in 1954.

Thorazine, since introduced in 1954, according to Smith, Kline, and French Laboratories, has been administered to more than 10 million patients, and almost 6700 articles discussing it have appeared in world literature.

It was in the April 30, 1955, American Medical Association Journal that Selling and Borrus reported on the Observation of Miltown as an effective ther-

apy in tension and anxiety states and various psychiatric disorders. In 1956, it was used in the control of pruritus, etc.; in 1957, its use was expanded to helping to control hypertension.

Atarax is a kindred drug to Bonamine. The clinical trials have pointed out its effectiveness in the treatment of anxiety. It has a use in reinforcing Thorazine therapy. The papers on its use came to my attention in 1956. I have seen one patient develop a dermatitis but other than that, no side-effects have been observed by us. I have used it only in the neuroses.

We see that the introduction and development of chemical tranquilizers have contributed to the treatment of mental and emotional disorders and in diseases that have an emotional component such as arthritis, allergies, hypertension, gastric ulcers, skin diseases, etc. The reaction of the patient to the tranquilizers has increased and stimulated the anatomical, physiological and chemical studies of the phenomena of anxiety and disturbed thinking.

"There are a number of interesting biochemical theories with respect to the action of hallucinogens and tranquilizers. For example, the fact that LSD produces psychotic symptoms in microgram doses led some investigators to hope that spontaneous schizophrenia might also have a biochemical origin. This hope was strengthened by the observation that hallucinogens whose structure is known-LSD, bufotenine, yohimbine, harmine, for example—all have an indole nucleus in common. The fact that products with the indole nucleus are formed from epinephrine in some metabolic pathways has led at least two groups of investigators to hypothesize a natural error in epinephrine metabolism as important in the origin of mental disease, but this theory is still considered highly controversial.

"Provocative as they are, such biochemical investigations into mental disease must probably await, for proper evaluation, a clearer understanding of how the brain functions in health as well as in disease."[2]

It may be in the future that chemical analysis of cerebral spinal fluid or a bit of tissue will tell us which chemical will be the effective drugs in the patient's emotional disturbance. Until then, we will have to try to use today's diagnostic tools and use today's medicine to the best benefit of our patient.

It is well but not sufficient that we keep in mind that a bottle of pills is not the entire solution to our patient's emotional problems. We, as therapists, have to help our patients gain emotional objectivity that in turn will give them self-confidence, self-reliance, and self-assurance.

The tranquilizers do not affect the ideational content of the anxious or the confused. They lessen emotional tension and achieve behavioral improvement, effecting tranquilization of the anxious, tense, and disturbed patient, without excessive drowsiness or clouding of consciousness. One of the successes of the tranquilizer drugs in the treatment regime comes when the person is calmer and can talk and listen and carry out the suggestions of the psychotherapists.

The patient's life can be balanced to meet his useful responsibilities. The patient reacting with anxiety can be helped to react with confidence when his doctor has helped him to first see the need for some changes in his feelings, thinking, and acting. Understanding can replace fear only when the understanding goes back to the cause of fear, only when the patient, with help, can see how impressions and feelings of the yesterday can color and dictate the reactions of today, whether normal or abnormal. Without abnormal fear there is no pathological anxiety. Without pathological anxiety there is greater comfort during the day and rest at night.

Psychotherapy is directed at both relieving excessive tension and enabling the patient to learn to appreciate the value of normal nervous tension and fears in normal living. While one may be overcome with the symptoms of apprehension, anxiety, and fear, some degrees of these emotions are normal personality necessities.

The question comes to mind, why all the new tranquilizers? The answer is logical: researchers are looking toward a better tranquilizer; one with less toxicity; less tolerance formation; freedom from pathologic effects—CNS, bone marrow, or liver; freedom from hematologic effects; a drug that will not cause depression or make depression worse; a drug that will not cause Parkinsonian syndrome; a drug that is effective in the minor and major nervous and mental disorders.

In the phenothiazine group we first had Thorazine. Then Sparine (promazine hydrochloride, Wyeth) was put on the market as a drug with less side-effects and to be given in twice the milligram dosage as Thorazine for a similar effectiveness. Sparine given intramuscularly is less painful than Thorazine. It is said to be less hypotensive. I have never used very large doses, but I have not seen any severe hypotensive reactions. I have not seen any allergic skin reactions. Wyeth Laboratories re-

port the incidence of agranulocytosis in patients receiving Sparine has been low—18 instances in approximately 3½ million patients. William, Johnson and Blankenship in the August 1957, Virginia Medical Monthly, report a case of agranulocytosis during Sparine therapy. The recovery was prompt following antibiotic therapy. It is of practical interest that diagnosis was suspected on clinical symptoms of sore throat, lethargy, temperature of 103.2 degrees with pharynx injected and a few small lymph nodes palpable in the right anterior cervical chain. The patient was on 50 milligrams of Sparine q.i.d. Pulse was 136. In two days WBC was 1000 with 96 lymphocytes and 4 monocytes. I have not seen any patient on Sparine develop Parkinsonian-like syndrome or jaundice.

Another drug with the purpose of being an improvement on Thorazine is Compazine, the claim being that it is highly effective, with low incidence of drowsiness and depression, rapid acting, highly acceptable to patients and no jaundice or blood dyscrasias as yet reported.

The Compazine Spansules have a place because the compazine is gradually released in the system and this is an advantage to the ambulatory patient. This drug has been helpful in patients who have agitated depression and in patients with neurosis.

Trilafon (Schering) is claimed to have greater potency, 5 to 10 times higher therapeutic index, no blood dyscrasias, renal and hepatic function not impaired. Trilafon is recommended for the psychoneurotic and agitated psychoses. I have not used this drug long enough to have formulated opinions, but when used in the office, give the 2 milligram tablet once or twice a day first to see how your patient reacts. It potentiates other sedatives or hypnotics. In my experience some patients have not tolerated Trilafon too well, reporting that they feel bad, apprehensive or confused. This was not associated with drop of blood pressure.

Pacatal (Warner-Chilcott) is another of the tranquilizers. I have had no experience with this drug. It is recommended for the psychoses and as adjunctive therapy in alcoholism, anxiety, advanced carcinoma, nausea and vomiting. It is a tranquilizer that is said to make the patients at times euphoric. Dosage is 25 mgm t.i.d. or q.i.d. for outpatients.

Ultran (Phenalycodol, Lilly) helps to restore emotional composure without impairing mental acuity and seems to have few side effects. It is not a phenothiazine. Its use is similar to Miltown and it causes some to be drowsy and others to be dizzy as Miltown may do. Dosage is 300 mgm t.i.d.

The alkaloid of Rauwolfia that I have had experience with is Serpasil. There are other alkaloids on the market either individually or in combination. In the profoundly disturbed, acute schizophrenics Serpasil has been used by some groups. The reports vary from 5 to 85% recoveries. Serpasil has been used effectively as an antihypertensive and sedative medication. We are all aware of the fact that it may cause depression, and thus it is not used with patients who are depressed.

I have had some patients with palpitation and other somatic functional complaints to be made much more comfortable with small doses of Serpasil. At the present time both in our out-patient clinic and in our hospital we use Serpasil rarely.

I think it is well for us to remember that patients who have been on this drug (reserpine) and are discontinued should be treated for six weeks as if they were still on reserpine when we are considering giving other medication because reserpine may potentiate the reaction of the medicine prescribed. Therapeutic lag and a therapeutic after-effect is a reserpine characteristic.

Meprobamate (Miltown and Equanil): These drugs have the advantage of being effective without frequent side-effects. (Dosage: 200 mgm. t.i.d. and 400 mgm. qhs). They do not produce depression and aid greatly in reducing anxiety and tension and thus allow the patients to sleep at night and be much more comfortable during the day. They are useful in treating the neuroses, alcoholism, and a help in the control of epileptic spells. We may, however, question the reports that there is "no tendency toward habituation or addiction observed." Any drug that gives any relief may be habit forming. There are reports— though I have not observed any—of withdrawal symptoms.

Atarax: Atarax was developed in Belgium from a pitperazine derivative. It is one of the kindred drugs to Bonamine. The clinical trials have pointed out its effectiveness in the neurosis group that have a large component of anxiety. It may reinforce Thorazine or Rauwolfia therapy. As far as is known today, there have been reported no toxic effects. The suggested dose varies between 30 and 50 mgm. a day in divided doses of two or three administrations during the day. If the patient complains of sleepiness during the day the dose should be cut down. Its chief value in using it alone is in the relief of tension of the milder nervous types. Often after a patient receives more potent therapy he can be main-

tained on Atarax safely, eliminating the possible toxic effects of some of the other more powerful tranquilizers.

I commented above on the thousands of papers on the tranquilizers that have appeared in world literature. The following is a review of some of these papers appearing in the September issues of Journals that have come to my desk. First, let us look at the September issue of the American Journal of Psychiatry. There we find a paper by Paul Feldman, "Two-Year Fate Study of Thorazine-Treated Patients"[3] with the following summary and conclusions: A confirmation of the fact that Thorazine is effective in the chronically psychotic patients. They report that 26.2% or 96 individuals treated over a two year period with Thorazine have been released from the hospital. They note that the younger schizophrenics are more likely to respond to Thorazine to the extent that their release from the hospital is feasible. The stability of the release is indicated by the fact that only 11 of the patients have been returned from parole. Feldman observed, as others have, that prolonged administration of Thorazine does not lead to tolerance formation. Eighty-five point four per cent of the patients are receiving identical or smaller dosages of Thorazine than they were receiving a year ago. Some patients who responded minimally to Thorazine have shown a better response to combined therapy. Eighteen of the Thorazine patients are showing a better response to combined therapy. The author noted evidence of continued toxicity of Thorazine after two years of medication. This reinforces the concept that ataractic therapy must at all times be under close medical supervision.

With observation of the more extensive use of phenothiazines clinical experience points to their greatest effectiveness in the symptomatic treatment of the overactive psychotic and confusional states. Any phenothiazine that I have used has been a central nervous system depressant whether Thorazine, Sparine, Compazine, or Trilafon. These drugs act on the brain or suprasegmental level. They act on the higher neural centers controlling vomiting, heat regulation, the motility of the heart and lung muscles, vasomotor and muscle tone, sleep or insomnia (at some state of concentration, these drugs can excite) and some control (?) of the hormones such as the secretion of the anterior lobe of the pituitary. The theory has been suggested that by depressing the autonomic nervous system and interfering with the synaptic transference of excessive psychomotor excitation between the diencephalon and the cortical areas tranquilization is effected without producing narcosis, coma or amnesia.

There is a second article in the September American Journal of Psychiatry, "Use of Miltown (Meprobamate) with Psychotic Patients"[4] by V. M. Pennington with the following conclusions: "Miltown (Meprobamate) was studied in 300 hospitalized psychotic patients. In the dosage range from two to twenty-four 400 mgm. tablets daily, the drug produced complete remission of symptoms in 3% of the patients, striking improvement in 35%, some improvement in an additional 46% and no significant change in the remaining 16%. Physical gains resulting from better sleeping habits and relaxation were made in about half the patients. Paranoid schizophrenics appeared to derive greatest benefit from the drug."

I am not familiar with the use of Miltown in as large doses as reported in this article, but the results received would indicate that Miltown even in large doses is not the drug of choice for the psychotic.

Again in the September, 1957, Journal of Psychiatry, there is a third article on the Tranquilizers, "A Biochemical Evaluation of the Activity of Certain Tranquilizers and Their Relationship to Hormonal Function"[5] by Gordon, Zeller and Donnelly. The authors state in their introduction, "While the physiological and biochemical changes now known to be produced by the phenothiazines are many, thus far no theory of their action is adequate to explain, or at least fully explain, their usefulness in psychiatric practice. However, the physiological impact of the phenothiazines on the endocrine systems are perhaps most promising in providing a biochemical rationale for their action.

Chlorpromazine is known to effect (1) pituitary-gonadal function; (2) pituitary thyroid function; (3) thyroid function; (4) adrenal-cortical function; and (5) adrenalin, while clinically lactation and alteration in menstrual function are not uncommon sequelae of chlorpromazine administration.

The authors studied the effect of Thorazine on some aspects of amino acid metabolism, a function effected by a variety of hormones. They noted the effect of drug action on the amino acid nitrogen in serum and cerbrospinal fluid of human subjects. They found that the phenothiazines like insulin lower the level of serum amino acids while the barbiturates and Miltown-Equanil do not effect their level. They also report the Miltown-Equanil and the barbiturates induce fast waves in the EEG.

What significance these results have for behavior is to be determined. The authors rightly point out, however, that multi-disciplinary studies, like theirs, give the best opportunity for solving the most difficult problem of all, that of human behavior.

Turning to another September issue we find in Industrial Medicine and Surgery an article "Evaluation of Tranquilizers"[6] by Dr. F. Garm Norbury in which he points out that tranquilizers may be bad for older railroad engineers in that they may affect their reaction time and their coordinating capacities. He further pointed out that Thorazine has been able to keep some people on their jobs, but cautioned that chlorpromazine potentiates the action of the barbiturates and opiates. It could hereby affect the reactive capacity of a person in any mechanical phase of railroading. Further, he noted Thorazine also potentiates the effect of alcohol.

At the Tucker Hospital on September 30, 1957, there were 78 patients in the hospital whose therapy had been individualized by Dr. Masters, Dr. Tucker, Dr. Fultz, Dr. Wood, Dr. Williams and myself. A study of these patients' treatment program on September 30th revealed that of the 78 patients 52 were receiving tranquilizing drugs, five getting a combination of two tranquilizers, and five a combination of a tranquilizer and a barbital. One-fifth of the patients were getting Thorazine; 1/5 getting Sparine; and 3/5 getting Miltown or Equanil. These fractions quite obviously point to the fact of combinations of tranquilizing therapy received by some of the patients. Two patients were getting Atarax. Three patients were getting Ultran. None were getting Compazine. This data immediately points to the fact that the predominant psychiatric patient that we hospitalize suffers from a neurosis with anxiety and tension for which Miltown and Equanil, Ultran and Atarax were prescribed. I will try to briefly explain our thinking in the selection of the most effective tranquilizer in the treatment of the various symptom complexes presented by the patients in our hospital and those seen and treated in our out-patient clinic where some 250 ambulatory patients are carried by being seen at required intervals. The new patients are seen frequently and with improvement patients are encouraged to become less and less dependent on their doctor. However, we have taught patients to report any variation of feeling and symptoms if they are still on medicine and especially if on the Thorazine type of tranquilizer.

The diagnosis determines whether the patient should be hospitalized or remain in the hospital or returned to his referring doctor for therapy if tranquilizers are to be used. The size of the dosage of tranquilizer and sometimes the tranquilizer used varies with whether the patient is ambulatory or hospitalized.

If Thorazine or a Thorazine type drug is used, we prefer the patient to be in the hospital for two reasons: 1st, it is used in the agitated disturbed major nervous diseases and thus one likes to have these patients in the hospital, and 2nd, Thorazine can both calm and upset the patient. There is no standard dosage that reacts in a standard way, so it is a drug that has to be individually adjusted. When used in office patients the minimum dose thought to be effective is prescribed and then increased. This would be 10 milligrams q.i.d. (8-12-4-8) and 20 milligrams at bedtime.

Thorazine just should not be given without taking time to sit down and explain to the patient that the medicine being given may at first make the symptoms worse before it becomes helpful. This understanding will help your patient to evolve through a couple of bad days when their original complaint may be worse and superimposed will be the drug confusion and feeling of detachment. Without understanding, we would have a patient with drug produced panic.

If the tranquilizer to be given is Miltown, Equanil or Ultran the patient should be warned about the feeling of being slowed up, sleepy and perhaps a feeling of dizziness during the first day or two. If these disagreeable symptoms continue for two days, reduce the dose.

When Atarax is the tranquilizer of choice, given in small doses it is my experience that patients rarely have any side reactions. I have one patient who developed a dermatitis. However, we instruct our patients to immediately get in touch with us if they have any new symptom whatsoever or if they feel worse. This is a good routine and I think a *must* routine if we are using tranquilizers in therapy.

If your patient is having lots of nervousness and inability to sleep due to pain or acute, disturbing problems that are worrying him more than he can handle during the day and preventing him from slowing up his thinking at night sufficient to allow him to sleep, then you may consider giving him a bromide or a barbital for a few days in addition to the tranquilizer. Again, it is important to keep in mind that the tranquilizer may make it advisable to use a small dose of the hypnotic.

I may comment on a question that is asked us

at times. "What can I give the patient who is nervously upset and we want to make more comfortable en route to the office or hospital?" This, in my opinion, is better taken care of with some of the older drugs such as sodium amytal, grains 3 or 6 by mouth or grains 7½ by vein; paraldehyde, 2 or 3 drams by mouth or 5 c.c. intramuscularly, or luminal sodium, grains 2 or 4 intramuscularly. A note to the doctor stating what the patient was given before leaving home is helpful to the receiving doctor.

In summary, the Thorazine group are powerful medicines. Use them with caution, being aware that you take the calculated risk of using a medicine that gives you 1% jaundice and as high as 50% disturbance in liver function—a medicine that can cause agranulocytosis. The percentage of its occurrence makes little difference to the patient in whom it occurs. It is your responsibility. So, again, you should have your patient report to you any change in symptoms—right then—especially sore throat, fever and weakness. The red spots, itching, jaundice, dizziness and muscle stiffness with tremor speak for side effects that require the stopping of medication, reduction of dosage and/or treating of the toxic effect. Thus reserve the Thorazine for your patients whom you think are going to develop a psychosis such as the new mother who has recently had a baby and is agitated about her responsibilities or unreal thoughts or your post-operation confusion or your patient in alcoholic delirium tremens.

The Miltown-Equanil-Ultran-Atarax medications are your relatively safe drugs to use in the neurosis. But don't let the patient medicate himself with the idea that because it is a tranquilizer he can use it to soothe his days and drug himself to sleep without paying a price; namely, becoming dependent on a drug and a drug that does take away some of the personality drives that make life a happy challenge.

The introduction of the new tranquilizers (and I understand there are now 27 of them on the market as of today) has the purpose of giving us a thorazine-type drug that is less toxic than Thorazine. At the present time we are beginning to use a Squibb preparation, Vesprin, which investigators have found to be less toxic in regard to liver damage and which has been effective where other Thorazine-types have not been. We will try and see. This must be our atitude toward the new drugs; namely, we must study their experimental use and if impressed, try them. But do not try them because of the enthusiasm of the literature sent us each day or the company's representative who can tell you how to cure your patient but has no responsibility for your patient's recovery.

Lastly, we have useful drugs in the proper tranquilizer used in the proper place. However, you who know your patients and their problems are the ones to give them the prescriptions and the psychotherapy. You can help the patient to become comfortable with his disturbing, fearful, unhappy feelings. You can point out the necessary changes in his daily life so that he can live under less pressure. You can give him helpful appreciation of how his hostile feelings about this or that have reacted on his cardiovascular system, his stomach, or caused him to have headaches or become fatigued. You can help him to regain health by giving him a little time to talk to you, as well as giving him a prescription.

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A Year's Experience with a Co^{60} Radiation Therapy Unit

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WHEN RADIATION is used in the treatment of subcutaneous cancer, the objective is to introduce into the tumor a "cancericidal" amount of ionizing energy while subjecting those intervening and surrounding tissues which cannot be left out of the beam to an amount which they can survive.

All physicians are familiar with the reactions which usually prevent the accomplishment of that objective with radiation energy produced by x-ray tubes activated by potentials of up to 400 K. V. Epitheliitis, mucositis, bone marrow depression, and radiation sickness, coming on acutely during therapy, force the radiologist to stop far short of "cancericidal" dosage all too often.

Evidence accumulated during the past 15 years or so has demonstrated that radiation produced by x-ray tubes activated by 1,000,000 volts or more, or an equivalent beam, comes appreciably nearer the goal. Because of the high initial and maintenance cost of supervoltage x-ray equipment, the equivalent beams have attracted a great deal of interest. One of these is the beam produced by the radioactive isotope, Co^{60}. Therapy units of practical design and reasonable cost which safely house a Co^{60} source of high enough curiage to get an output of as high as 90 r per minute at 50 cm. source-skin distance are now being marketed by most of the major x-ray equipment manufacturers.

In the late spring of 1956, the Department of Radiology at the University of Virginia acquired a 1000-curie Co^{60} source and the second Co^{60} teletherapy unit with rotation off the Barnes-Keleket assembly line.

PHYSICS

Before commenting on our experience with this unit, it is necessary to compare the quality of its beam with that of orthovoltage x-ray units. $_{27}Co^{60}$ is obtained by adding a neutron to $_{27}Co^{59}$, the ordinary metal which occurs naturally in large quantity. This is done by bombarding stable cobalt with a stream of neutrons in a nuclear reactor.

The $_{27}Co^{60}$ atom, consisting of 27 protons and 33 neutrons, contains intolerable inner tensions, resulting in a series of subatomic rearrangements (Fig. 1)

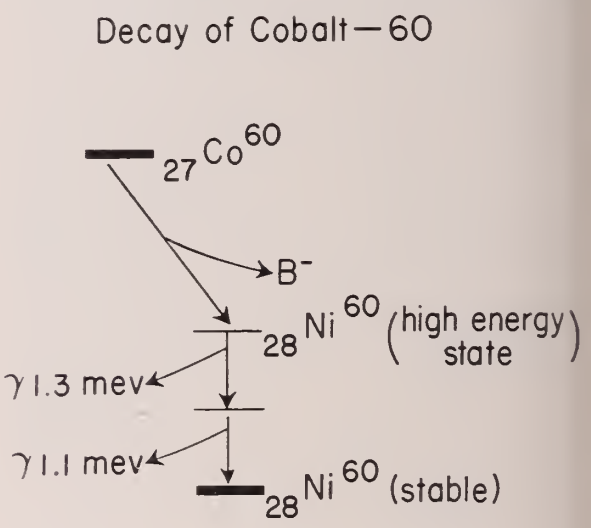


Figure 1.

which relieve the tension and end in the restoration of stability. First, a neutron breaks up into a proton and an electron. The electron is ejected. This leaves an atom made up of 28 protons and 32 neutrons. The atomic weight is therefore still 60. But this atom is an old familiar friend, the element nickel. Its electron shells, however, are in what the physicists call an excited state. Their rearrangement to a low energy state, which takes place immediately after the electron has been ejected, is accompanied by the release of atomic energy, after which stability exists.

The $_{27}Co^{60}$ atom, then, is a beta emitter, and the excited state nickel atom is a gamma emitter. The transition from $_{27}Co^{60}$ to $_{28}Ni^{60}$ takes place at such a rate that half of the $_{27}Co^{60}$ is converted every 5.3 years. The gamma emission is of two energies, and two energies only—1,330,000 electron volts and 1,170,000 electron volts, so that the beam is, for all practical purposes, homogeneous. In contrast the

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average energy wave of the heterogeneous beam of x-rays produced by an x-ray tube activated by a 250 K. V. potential is 150,000 electron volts. To express this difference in another way, with the 250 K. V. x-ray unit, a beam of x-rays with a half value layer of up to 3 mm. Cu may be obtained. The Co^{60} beam has a half value layer of 18 mm. of Cu, or 1 cm. of Pb. If the two beams are plotted on a graph whose abscissa measures centimeters of tissue thickness and whose ordinate measures the percentage of ionizations per unit of tissue volume (Fig. 2), we

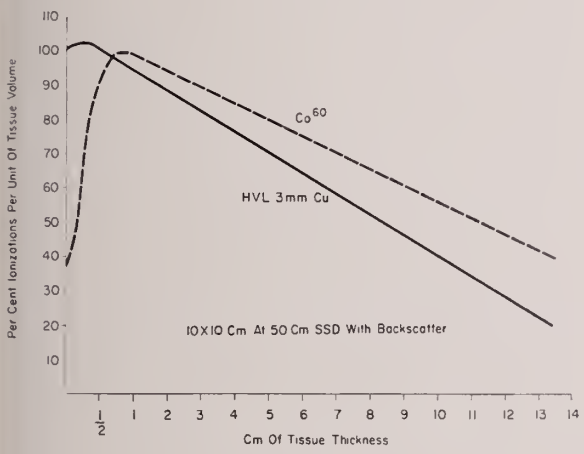


Figure 2.

can note several other points of interest. We see that in the first few millimeters of tissue, the percentage of ionizations per unit of tissue volume produced by the 250 K. V. beam rises to over 100%, but that produced by the Co^{60} beam is only about 40%.

The clinical significance of this difference lies in the fact that orthovoltage x-radiation produces radiodermatitis with far smaller air dosage than does Co^{60} radiation.

It has been argued that the skin-sparing effect of the Co^{60} beam is a disadvantage because the physician loses thereby an important index of the patient's tolerance to radiation. I cannot agree that the physician's convenience takes precedence over the patient's comfort. The relative freedom from skin reaction when using the Co^{60} beam keeps the physician on edge, but the far greater ease with which the patients go through a course of therapy is most satisfying. More important, a major obstacle to the delivery of a high tumor dose of radiation is removed.

Returning to Figure 2, we see that the percentage of ionizations per unit of tissue volume for the 250 K. V. beam falls off rapidly after the beam passes through the superficial millimeters of tissue. In contrast, the percentage of ionization for the Co^{60} beam rises to maximum at a depth of five millimeters, then starts falling off, but more slowly. The clinical importance of this part of the curves lies in the fact that for the same air dose, the depth dose produced by the Co^{60} beam is significantly higher than for the 250 K. V. beam. Whereas, with the latter beam, the radiologist must usually be satisfied to deliver 3200 to 4000 r tissue dose to a deep-seated tumor, he can usually exceed a tissue dose of 5000 r with the Co^{60} beam.

Another clinical advantage of the Co^{60} beam is due to its extremely high energy level, over 1,000,000 electron volts, and the complete absence of low energies. With the 250 K. V. x-ray beam, we get an average of 150,000 electron volts and a heterogeneous beam ranging down to lower energy levels, how low depending on how much filtration is used. At these energy levels, there is greater absorption in atoms of higher atomic number; whereas, at the energy level of the Co^{60} beam, absorption of energy, gram for gram of tissue, is essentially the same, regardless of chemical composition. So, with its high calcium content, the Co^{60} beam is not, and orthovoltage x-radiation is, absorbed selectively by bone. This is reflected clinically in a reduction in bone marrow depression when the Co^{60} beam is used. I believe this feature is also responsible for the clinical observation that there is less radiation sickness with the Co^{60} beam. The bone-sparing effect is particularly useful when children's skeletons with their highly susceptible growth zones have to placed in a beam of ionizing energy.

OUR EXPERIENCE

We started treating patients with our Co^{60} unit on July 1, 1956. During the first year, July 1, 1956, through June 30, 1957, we completed treatment of 231 patients. It is interesting to note that five of these patients had two tumors, not recurrences but two entirely different tumors so we treated 236 tumors in 231 patients. Sixty-six of the tumors were in the head or neck, forty-one in the thoracic cavity, forty-three in the abdominal cavity, sixty in the pelvic cavity, fifteen in the skeleton, and eleven in other locations.

The comparison we can make at this time of Co^{60} radiation as compared with orthovoltage x-radiation must obviously be confined to immediate effect. Five years from now, we can begin to compare long-term results.

TUMORS IN THE HEAD AND NECK

To consider first, then, the 66 tumors of the head

and neck which were treated with Co^{60} radiation, 12 of these were intracranial. We were able to introduce the tumor dose we set out to introduce in all 12 cases, had no skin reactions, inconsequential radiation sickness and bone marrow depression, and only occasional minor symptoms of increased intracranial pressure. The contrast in the clinical course during radiation with the two different beams is forcefully illustrated by our experience with a 40 year old female acromegalic. I started her on orthovoltage radiation, half value layer 2.9 mm. Cu, using a treatment plan including five portals through which the enlarged sella was cross-fired. Headache, nausea and vomiting, and blurred vision developed within 48 hours. The symptoms were so severe that the therapy schedule had to be interrupted frequently, the patient was ill and discouraged. In 25 days, we could introduce only 1500 r tumor dose. At that point, I shifted her to the newly available Co^{60} teletherapy unit. It was then necessary to use just two lateral opposing portals, through which she received another 1500 r tumor dose in only nine days and without side effects. I am sure the difference in reaction was due, not only to the different quality of the two beams, but to the much smaller volume of cerebrum that had to be radiated with the Co^{60} beam in order to reach the desired tumor dose.

In this group of 66 head and neck tumors, there were seven in the nasopharynx. One was in a 62 year old man, a transitional cell carcinoma high on the posterior and right walls. The Co^{60} beam was directed at the tumor through two opposing lateral portals and through a portal over each antrum. Nice adjustment of the dosage through each portal was required to produce isodose curves which would avoid hot spots in the nasal septum and which would build up a satisfactory tumor dose while delivering a tolerable dose to the uncomfortably nearby brain. We finally got 5800 r into the tumor and only 4200 r into the closest brain tissue. The treatment took seven weeks, there was a slight to moderate mucositis, no skin reaction, no bone marrow depression, and the only evidence of radiation sickness was mild anorexia and fatigue toward the end of the course.

For comparison, the records of five patients with the same tumor treated by x-radiation with a half value layer of 2.9 mm. Cu were reviewed. The average time spent under therapy was eight weeks, the tumor doses achieved ranged from 4000 to 4500 r, and in every case treatment was stopped short of the 5500 r objective because of severe epitheliitis and radiation sickness.

With one exception, in the entire group of tumors of the oral cavity and upper respiratory tract, we have had the same experience. We have been able to introduce tumor doses as great as the normal tissues are supposed to be able to tolerate, from 1000 to 2000 r more than we had been able to introduce with orthovoltage x-radiation, in a relatively shorter time and with far fewer side effects. Mucositis has been severe enough to force a change of treatment schedule in a few patients. The mucositis produced by the Co^{60} beam develops suddenly, flares up alarmingly, but fades just as quickly. The exception to which I referred is intrinsic tumors of the larynx. Here the desired tumor dose of 6000 r can be reached with orthovoltage x-radiation. However, there is a severe epitheliitis, and more persistent mucositis than with Co^{60} radiation.

Particularly impressive is the relative ease with which far-advanced cancer in this region can be treated with the teletherapy unit. For example, one of our patients, a 58 year old man, had a grade II epidermoid carcinoma of the hypopharynx invading widely through the larynx well down the cervical trachea. In addition, he had massive bilateral cervical node metastases. He was treated with the CO^{60} unit, starting with two large opposing lateral portals covering the entire neck. As the tumor regressed, the portals were narrowed and moved forward to spare the spinal cord. He received 4100 r tissue dose in the entire neck, 5800 r in the part of the neck anterior to the cord, all in five weeks and without complications. The immediate response was excellent. A review of records of comparable lesions treated with orthovoltage x-radiation shows delivery of tissue doses of 3000 to 4200 r in five to seven weeks with numerous interruptions and compromises due to side effects.

TUMORS IN THE THORACIC CAVITY

To turn to our 41 thoracic cavity tumors, there were 22 primary bronchogenic carcinomas, 10 cases of metastatic carcinoma, four of mediastinal Hodgkin's disease, and five carcinomas of the esophagus.

Contrast the two following case abstracts.

A 67 year old man with carcinoma of the middle third of the esophagus was treated with x-radiation, half value layer 2.9 mm. Cu. The tumor was cross-fired through six portals, receiving 4500 r in 65 days. Treatment was interrupted four times by either severe nausea and vomiting or by a danger-

ously low white blood cell count, and was finally discontinued because of epitheliitis. The immediate response was disappointing—slight tumor regression noted roentgenologically and little clinical improvement.

The other case is that of a 54 year old man who also had an inoperable carcinoma of the middle third of the esophagus. He received Co^{60} radiation with full rotation, got a tumor dose of 5300 r in 36 days and experienced no radiation sickness, bone marrow depression, or epitheliitis. The immediate response was dramatic, with excellent clinical improvement and marked tumor regression demonstrated roentgenologically. I had planned to give this patient between 5500 and 6000 r tumor dose, but stopped at 5300 r because check roentgen studies had shown, in addition to rapid regression, a growing ulceration in the tumor. I feared perforation into the mediastinum but this did not happen.

In general, when treating thoracic tumors with the teletherapy unit, we have been able to deliver significantly larger tumor doses more rapidly with appreciably better immediate responses and with markedly milder side effects.

TUMORS IN THE ABDOMINAL CAVITY

This is equally true of tumors of the abdominal and pelvic cavities. We treated 103 such tumors in the twelve months' period. Encouraged by the better palliation we were getting in carcinoma of the bronchus and esophagus, we selected some carcinomas of the stomach and pancreas for Co^{60} therapy. We treated three adenocarcinomas of the stomach and five carcinomas of the pancreas, choosing patients whose gross disease was, though surgically ineradicable, at least confined to an area that could be covered by a 15x15 cm. portal, and whose tumors were palpable so that their progress during radiation could be followed. One of the gastric tumor patients was in such poor condition that we discontinued treatment when he showed no improvement in one week. He died several days later. The other seven patients received tumor doses of 5300 to 5900 r in from five to six weeks. In one of the gastric tumor patients and in one of the pancreatic tumor patients, the immediate response was slight; in one of the pancreatic cases, moderate; and in one gastric and three pancreatic tumors, excellent. In these four patients, palpable tumor disappeared, pain and other distress cleared up, and the general condition improved greatly.

We have no similar group treated with x-radiation because we have rarely undertaken to treat tumors of the pancreas or stomach, other than lymphomas and round cell carcinomas. From our experience with the latter, we can say that the radiation sickness and bone marrow depression produced by radiation of the upper abdomen in comparable dosage with the Co^{60} beam is much less than with orthovoltage x-radiation.

TUMORS IN THE PELVIC CAVITY

We treated five patients with ovarian carcinomas. Three of these had had previous orthovoltage x-radiation. The story of one 46 year old woman was that bilateral ovarian adenocarcinoma was discovered at exploration four and a half months before she was referred to me. Multiple masses in various degrees of fixation could not be removed. She was given 4300 r tissue dose, half value layer 2.9 mm. Cu, at a level halfway through the anterior-posterior dimension of the abdomen through two pairs of opposing portals covering the right and left lower abdominal quadrants. This was done immediately after operation, required 45 days, was accompanied by considerable radiation sickness, and the course of radiation was terminated because of epitheliitis and proctitis. The palpable masses regressed only moderately. When we first saw her, three months after the radiation, a large mass filled the cul-de-sac, other smaller masses could be felt through the abdominal wall, and there were polypoid tumors projecting through the vaginal wall. The proctitis had cleared up, and a second degree skin reaction was healing satisfactorily with the usual sequellae. After considerable hesitation, I decided to go ahead with Co^{60} radiation in the hope that a larger tumor dose in a shorter time might accomplish more than the 4300 r in 45 days could do. We rotated the head of the teletherapy unit around the patient's pelvis and delivered 5300 r centrally in 37 days. The immediate response was good. The tumors were regressing nicely at the end of therapy, and even the large one in the cul-de-sac could not be palpated six weeks later. Radiation was stopped at the 5300 r dosage because of beginning skin reaction in the inguinal folds and on the vulva, and because of recurrence of the proctitis. However, both the epitheliitis and mucositis cleared upon promptly. Anorexia, nausea, and general depletion were present during the last week of therapy, but in tolerable degree.

Another one of the ovarian carcinoma patients who

received both orthovoltage x-radiation and Co^{60} radiation had a very similar history, the third was even more striking. This woman was so troubled by nausea and vomiting that we had been able to administer a tissue dose to the mid-abdomen of only 2400 r in 30 days. When she was transferred to the newly available Co^{60} teletherapy unit, her vomiting ceased entirely, and her nausea almost disappeared. We then gave her another 2500 r in 12 days. The combined therapy produced a good immediate response. One cannot help wondering if the different reaction to the two radiation beams is in part psychic, but it is certainly our experience that when patients who have had both have to have more radiation, they beg to have the Co^{60}.

We treated a total of 38 patients with carcinoma of the cervix in our first year of operation. It has been easy to supplement the gamma roentgen dosage delivered by radium to bring the total dosage at Point B to close to 6000 r, and to Point A to close to 8000 r. We have been pleased with the immediate response in patients who, for one reason or another, could not have radium, and whose treatment consisted, therefore, of Co^{60} radiation only. One was a 46 year old woman with a League of Nations Stage IV cervical carcinoma. The cervix and vagina were so diseased and distorted that radium could not be introduced, but there were no known distant metastases. Using the teletherapy unit in full rotation, she received 5600 r in 37 days to the contents of the entire true pelvis. The response was excellent and there were no side effects. Therefore the gynecologist and I decided to push on. This woman had a radiosensitive tumor, nothing could be offered but palliation, and her predicament was such that she could well afford to risk late radiation necroses. So we added another 1100 r, giving her 6700 r tissue dose in 59 days. There was no skin reaction, cystitis, proctitis, or systemic reaction of other than mild degree. Four months later, her tumor is still in a state of remission.

In contrast, a very similar case, that of a 47 year old woman with a League of Nations Stage IV cervical carcinoma in whom radium could not be used and whose treatment consisted of x-radiation, half value layer 2.9 mm. Cu, was reviewed. We introduced 4100 r tissue dose in 41 days. The course was marked by nausea, vomiting, diarrhea, and a falling white blood cell count. Therapy was discontinued because it was felt that skin tolerance had been reached. The response was slight and brief.

DISCUSSION

The qualities of the Co^{60} beam which fit it so nicely for the handling of certain problems involving malignancies do not permit the radiologist to reach his objective—the introduction into the tumor of a "cancericidal" amount of ionizing energy while subjecting those intervening and surrounding tissues which cannot be left out of the beam to an amount which they can survive; but they permit him to come closer to the goal. It now seems clear that in relatively few subcutaneous malignancies is the differential great enough for the normal tissues to survive truly cancericidal dosage. So dramatic improvement in cancer cure rates must still await new methods of treating the disease, or a way to increase the susceptibility of malignant cells to ionizing energy.

In the meantime, the Co^{60} beam, and other beams of comparable energy, make it possible

1) to introduce into subsurface lesions significantly larger tumor doses;
2) to introduce the same tumor dose in fewer days;
3) to accomplish these two important advances with little or no skin reaction and with much less bone marrow depression and radiation sickness. The result is better palliation of incurable malignancies and perhaps a little higher cure rate.

Radiation of the energy order of the Co^{60} beam is to be preferred to orthovoltage x-radiation in the treatment of tumors in the head and neck, and in the thoracic, abdominal and pelvic cavities whenever a large tumor dose is needed. The same is true of deep-seated tumors in the musculo-skeletal system which need a large tumor dose.

When it is necessary to introduce radiation through skin damaged by previous radiation, advantage can be taken of the skin-sparing effect of the high energy, homogeneous beam, even though the tumor dose needed is not large and even though the lesion is immediately subcutaneous.

The bone-sparing effect of the high energy, homogeneous beam makes it desirable when a child's skeleton must be exposed to ionizing radiation.

My residents, for whom Dr. Carter speaks, and I obviously can at this time report only immediate results. We undoubtedly will encounter late complications due to the very qualities of the Co^{60} radiation which have endeared it to us; but until cure rates of the malignant conditions which radiologists are called upon to treat rise much higher, until their

survival times grow much longer, and unless the late complications prove very numerous and severe, we can accept that risk.

After an experience of one year with a Co^{60} teletherapy unit, we are enthusiastic. Our enthusiasm is shared by our patients who have have treated with both orthovoltage x-radiation and Co^{60} radiation.

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Driver Fitness Rules

Even though a person has a good safety record and thinks he's in excellent health, there are certain circumstances under which he shouldn't drive. Some of the things that can make a driver dangerous are listed in a new American Medical Association pamphlet, "Are You Fit To Drive?" The pamphlet, to be distributed through physicians' offices, was prepared by the A.M.A. Committee on Medical Aspects of Automobile Injuries and Deaths, in cooperation with the Center for Safety Education, New York University.

A doctor can help answer the question of driving fitness. The pamphlet urges drivers to ask their doctors when they are in doubt about their fitness.

Some of the things that make a driver dangerous are:

—Emotional upsets. Unless a person can keep his mind on the wheel and not on his worries, he should not take the wheel.

—The driver's attitude. Some drivers feel the other fellow is always wrong. Some are aggressive and intolerant when they get into a car. They need to be mature.

—Sleepiness. A sleepy driver is as much a hazard as a drinking one. Dozing is not restricted to night driving. When making long trips, a person should rest every two hours, drinking coffee or cola to stay alert. He should not take any medicine that makes him drowsy.

—Medicines. Antihistamines, cold tablets, sedatives, tranquilizers, and some other drugs may dull reflexes or impair coordination. Stimulants may make a person nervous. The doctor should be consulted about the side effects of any drugs.

—Faulty vision. A driver needs regular eye examinations; if he notices any change in his eyes between examinations, he should see his eye doctor immediately. To reduce eye strain, he should wear properly fitted sunglasses, but not after dark. To avoid tiring the eyes, excessive night driving should be avoided if possible. Hay fever or the common cold can blur the vision dangerously.

—Certain nerve and heart disorders. Some may cause convulsions and others may result in occasional loss of consciousness. The doctor is the best judge of whether a patient with these disorders should drive.

—Diabetes. Insulin reactions may cause difficulties, but diabetic patients who follow their doctor's advice can be safe drivers.

—Old age. After 65, reflexes and coordination tend to be a little slower, people tire more easily, resistance to glare is lessened, and the ability to see at night is declining. Older drivers should schedule their trips at non-rush hours and should not spend long periods at the wheel.

And, of course, drinking.

Iron Metabolism and Iron Deficiency Anemia

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THE USE OF IRON in medical therapeutics is as old as the history of medicine itself. Iron was given the name "Mars" by the alchemists since it was thought that the god of war had imbued the substance with his strength. It was used in the treatment of weakness, and such afflicted patients were given to drink water in which old swords had been allowed to rust. Celsus advocated using water from blacksmith shops, into which the white hot iron was thrust, as a treatment for enlarged spleens. Thomas Sydenham in 1681 recognized that iron therapy was directed at the hemopoietic system and expressed the opinion that "its (iron) chief curative indication is the restoration of the blood—the fount and source of the spirits." That he anticipated modern trends in pharmacology by recognizing the commercial value of potions rich in alcohol, is shown by his prescription of "iron or steel filings steeped in cold Rhenish wine." In 1831 Pierre Blaud introduced an iron preparation which closely resembles the medication we use today in the treatment of iron deficiency anemia—a pill compounded of ferrous sulfate and potassium carbonate. Blaud also saw that iron restored to blood the most important principle which was lost—its coloring substance.[19,33,7]

Despite this rich historical heritage, very little additional knowledge regarding the metabolism and medicinal usage of iron can be found prior to the 1930's. A further impetus was provided for the study of this vital element with the introduction of radioactive iron (Fe^{59}) for experimental use. In the past 15 years, the hematological literature has been saturated with information regarding the absorption, excretion, utilization, and therapeutic applications of iron. The purpose of this communication is to attempt to pull together from the available literature some of the most important facts regarding iron metabolism and its relationship to hemopoiesis.

IRON METABOLISM

The normal adult has a total body iron of approximately 3-5 grams, and practically all of this iron is bound to protein.[30] In general, iron is bound to one of two types of protein: proteins containing iron as part of a heme or porphyrin unit and proteins containing iron not bound in a porphyrin ring. The larger amount of iron is present in the former group which includes hemoglobin, myoglobin, the cytochromes, peroxidase, and other important enzymes. Hemoglobin alone accounts for about one-half of the total body iron. Plasma iron is bound to a non-heme protein called transferrin or siderophilin. This protein is normally 1/3 saturated with iron and the normal plasma iron value is 0.12 mgm.%.[2]

The remainder of the iron in the body is storage iron in the form of two non-heme, iron-protein complexes, ferritin and hemosiderin. Ferritin is composed of apoferritin, a colorless protein, and iron. It is not visible microscopically, does not take the usual iron stains; and, in addition to its function in iron storage, is concerned in iron absorption as well as some role in irreversible shock and hypertension, according to the work of Shorr. Hemosiderin is microscopically visible as golden yellow granules, takes the conventional iron stains, and composes something less than 1/2 of total iron stores in the normal adult. Storage iron is found in the reticuloendothelial cells of the body with about 25% being present in the liver.

As will become apparent later in the discussion of iron deficiency anemia, the quantitation of iron stores is extremely important in the pathogenesis of iron deficiency states. This problem was very nicely worked out by Haskins and co-workers.[6] A series of seven weekly phlebotomies of 500 c.c. was carried out on a group of normal adult volunteers. Since it is well established that iron stores must be depleted before iron deficiency becomes manifest in the reduction of the circulating red blood cell mass, it was relatively easy to determine the amount of iron removed from the body in the form of hemoglobin before anemia became apparent. Iron stores were estimated in this manner as being 1000-1500 mgm.

For most practical purposes iron can be regarded as a "one-way substance" in the adult male, since, once absorbed into the body, excretion of iron is virtually nil. The total daily loss of iron from the body is about 0.5-1 mgm., minute quantities being lost in feces, sweat, urine, and desquamation of

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epithelial cells.[1,28,34] Of course, in the menstruating female, there is an additional monthly loss amounting to 15-30 mgm of iron.[1,10] Aside from these "normal" losses, any further depletion of body iron is due to blood loss.

Iron is absorbed from the gastro-intestinal tract with an absorption gradient decreasing from stomach to colon. Maximum absorption has been shown to take place in the upper portion of the duodenum near the pylorus.[1] Using the radio-isotope Fe^{59}, it has been shown that iron contained in food is absorbed less well than iron salts,[3] and that ferrous salts are absorbed more completely than equal weights of ferric salts.[5] In addition to the importance of the form in which the iron is presented to the intestinal mucosa, several local and systemic factors have significant effects on iron absorption. The presence of free hydrochloric acid in the stomach assists in the absorption of iron by breaking down food-iron complexes and making the iron portions more accessible to the intestinal mucosa. However, free hydrochloric acid is not obligatory for iron absorption as is clearly shown in the demonstration of iron absorption in patients with pernicious anemia.[3] Since ascorbic acid, a reducing agent, tends to maintain iron in the ferrous state, it would be expected to increase iron absorption. This has been demonstrated to occur by the addition of ascorbic acid to foods[3,11] or iron salts.[2,16] The effect of ascorbic acid is a local one, since large amounts of ascorbic acid given I.V. at the time of feeding have no appreciable effect on iron absorption. An interesting clinical corroboration of the effect of ascorbic acid on iron absorption is seen in scurvy where the serum iron is low prior to therapy, then rises to normal levels after treatment with ascorbic acid alone.[16] Iron deficiency anemia[30,31] and pregnancy[4] cause increased iron absorption and there is evidence to the effect that anemia *per se* increases iron absorption,[31] but this is controversial and will be referred to later.

The normal daily diet contains 10-30 mgm. of iron, and since only 1-2 mgm. need to be absorbed in order for the body to remain in iron balance, there must be some regulating mechanism present which prevents accumulation of excess iron in the body. The most adequate hypothesis to explain this mechanism is the so-called "mucosal block" theory.[4,30,34,35] This states that there is a static amount of apoferritin in the mucosal cells of the intestine. This combines with the absorbed ferrous iron to form ferritin. The ferritin thus formed is in equilibrium with the tissue stores of iron through the intermediation of the plasma iron, transferrin. If there is no iron deficiency present, mucosal apoferritin soon becomes saturated with iron and since the ferritin cannot release its iron, further iron absorption is blocked. In the presence of iron deficiency, apoferritin rapidly becomes unsaturated and iron absorption continues. It is generally felt that this hypothesis does not explain all of the known facts concerning iron absorption, but that it is the most satisfactory approach to the problem at present.

IRON DEFICIENCY ANEMIA

The anemia of iron deficiency is probably the most frequently seen anemia in clinical medicine. In addition, the pathogenesis of this anemia in the adult is quite uniform and simple. Iron deficiency anemia in the adult male is due to blood loss. Because of the fact that the normal individual has iron stores amounting to 1000-1500 mgm. of iron and the fact that these iron stores must be depleted before iron deficiency becomes manifest in the circulating hemoglobin mass,[6,14] the anemia of iron deficiency is often a late manifestation of blood loss. Approximately 0.5 mgm. of iron is needed to replace each 1 c.c. of blood lost,[4] so it is easy to estimate that 2-3 liters of blood have to be lost to the body before anemia appears in a person who originally had normal iron stores. Therefore, once the diagnosis of iron deficiency anemia is established, it is the obligation of the physician to determine the source of blood loss.

Iron deficiency in the adult female is similar in origin to that in the male, with the exception of iron deficiency states in pregnancy and lactation. The total amount of iron lost to the mother during pregnancy and following delivery is approximately 500-725 mgm.[10,14] This iron loss is documented by the increased iron absorption during the last trimester[4], and the changes in serum iron and iron binding capacity during the last trimester which are qualitatively similar to those seen in iron deficiency anemia.[9] A portion of this iron loss at parturition is compensated for by the fact that the usual monthly 15-30 mgm menstrual loss is saved during pregnancy. It must be remembered that even in women with normal iron stores, a mild anemia may appear in pregnancy which is physiologic. This is due to the fact that although blood volume increases about 30% during pregnancy, there is a relatively greater increase in plasma volume than in red cell mass, producing a moderate degree of

hemodilution.[10] Lactation over a period of 6 months subtracts a further iron loss of approximately 150 mgm.

The newborn infant fortunately enters the world with an excess of iron in the form of hemoglobin. This is important, since his early diet is often deficient in iron. A fact in this regard which needs re-emphasis is that a delay in tying the umbilical cord until it has stopped pulsating will conserve 12-18 gm. of hemoglobin.[34] During the first year of life the infant's blood volume triples and iron must be supplied for this growth. Usually the iron supplied by hemoglobin breakdown during the neonatal period plus the amount absorbed from the diet is sufficient to meet the demands of growth. Still, infancy is the only period during which iron deficiency anemia occurs as a result of dietary deficiency of iron. It is obviously possible for an exception to occur to this statement. A diet totally deficient in iron could produce iron deficiency anemia over a period of 3-6 years in the male or a briefer time in the female. Such a diet would be almost impossible to achieve but in a day of extreme food faddism, it is at least theoretically possible. To my knowledge, no well-documented case of iron deficiency anemia in the adult due to an iron deficient diet has been reported.

The diagnosis of iron deficiency anemia is not difficult and can usually be made without resort to elaborate laboratory techniques. In any person who is suspected of having iron deficiency, a careful history with regard to possible sources of blood loss is immensely important. Aside from the presence of pallor there may be no remarkable findings on physical examination. Spoon nails, glossitis, esophageal adhesions (Plummer-Vinson Syndrome) may be present but are seen only in long standing depletion. Examination of a well-stained blood smear will usually give the most important clue in diagnosis. Characteristically the red cells will appear hypochromic with marked variation in size and shape but a decided tendency toward small cells. Red blood cell indices will usually confirm the hypochromic microcytic anemia. Only two other types of anemia will give a similar picture on smear: Mediterranean Anemia (Thalassemia) and the ultrarare anemia of pyridoxine deficiency.[12] The former is usually easily distinguished by family history, splenomegaly, mongoloid facies, etc., and only one proven case of the latter has been reported.

It is possible and not infrequent for a mild iron deficiency anemia to be present without the characteristic alterations of red cell morphology. These are the cases which cause the greatest difficulty in diagnosis. As has been stated previously, iron stores must be depleted before anemia can be present due to its deficiency (except in the case of acute brisk hemorrhage). Only after there is exhaustion of iron stores will morphological changes occur in the red blood cells, and in chronic slow blood loss, it may take several months for these changes to occur. It is in these cases that we would like to have some method of estimating iron stores. Fortunately such a method is available and requires very little in the way of laboratory equipment. It has been stated previously that iron is stored in the forms of ferritin and hemosiderin and that the latter is a compound which is visible microscopically and takes the usual iron stains. The reticulo-endothelial system is the iron storage depot and a portion of this can be biopsied by performing a sternal or iliac marrow aspiration in the usual fashion. A satisfactory aspiration will yield some particulate matter in the form of bony spicules, fat, and surrounding R-E cells. Glass slides are then smeared with this material and can be examined with the oil immersion objective of the microscope. The golden-yellow refractile granules of hemosiderin can be found around the marrow particles. This requires some experience in the method, and a more satisfactory means of recognizing iron in the marrow is the use of Berlin Blue Stain as described by Rath and Finch.[20] With this stain, the hemosiderin granules assume a bright blue color and are easily recognized. The presence or absence of marrow iron affords the most reliable and the most easily accessible means of estimating iron stores.[14,26,27,37] The presence of stainable iron in the marrow in any more than minimal amounts in an anemic person virtually precludes iron deficiency as a cause of that anemia. The absence of stainable iron in the marrow of such a person cannot be considered as diagnostic of iron deficiency anemia, since a combination of factors could be present, but it is diagnostic of an iron deficiency state. Hemolytic anemias, pernicious anemia, thalassemia, pyridoxine deficiency, the anemia of infection, hereditary hemoglobinopathies all show increased stainable iron in the marrow.[13] In our laboratory we have utilized the Berlin Blue stain in estimating the stainable marrow iron of approximately 50 persons with various hematologic abnormalities as well as a scattering of other diseases and a few normals. In all cases in which there was markedly diminished or absent stainable

iron, the patient either gave a clear history of blood loss or demonstrated a hematologic response to therapeutic iron.

There are other more complicated but generally less helpful laboratory procedures which give information regarding the adequacy of iron stores or the presence of iron deficiency. In iron deficiency anemia the serum iron level is depressed, the latent iron binding capacity of the serum is increased, the free erythrocyte protoporphyrin is increased. These methods are beyond the scope of most clinical laboratories but are mentioned here for one purpose. It has been frequently demonstrated that the serum iron level is generally low in the anemia accompanying chronic infection.[23,26] This has caused some physicians to feel that such anemias should respond to therapeutic iron. Those who have used that therapy under well controlled conditions are almost unanimous in the belief that the anemia of chronic infection is not affected by oral or parenteral iron.[23,25]

The object of therapy in iron deficiency anemia is to provide the necessary building block, iron, for the restoration of hemoglobin levels to normal, and in addition, to replenish iron stores. The first of these goals is easier to achieve than the second. It has been shown that an adequate daily diet contains from 10-30 mgm. of iron, of which, from 1-2 mgm. per day are absorbed. This small amount of iron absorbed is sufficient to maintain the individual in iron balance. If anemia due to blood loss intervenes, the body is able to increase iron absorption from food.[3] There is a limit to this increased absorption since iron deficient subjects on a normal diet have been shown to absorb no more than 5.0 mgm. of iron from food sources[24] with average absorption being 3.1 mgm. in these persons. At this rate it would take about 88 days to replace each pint of blood lost. Obviously, supplementary iron is needed to replace the lost blood. Further studies on iron absorption have shown that, as the dosage of iron increases past a certain point, percentage absorption decreases. When dosage of iron is greater than 400 mgm. of ferrous iron daily, the amount of iron absorbed is nearly maximal[14] and further increases in iron dosage provide very small increments in iron absorption. This amount of iron is provided by 1.2 gm. of ferrous sulfate or 1.8 gm. of ferrous gluconate daily, which is usually divided into three doses. Iron absorption can be potentiated by being taken on an empty stomach or by the addition of ascorbic acid, although the latter is seldom necessary and more costly to the patient. Iron salts taken in the prescribed fashion will produce maximal reticulocyte response in 5-10 days, followed, after a 3 day lag period, by a progressive rise in hemoglobin. After the anemia has been corrected and before iron has been restored in the reticulo-endothelial system, iron absorption decreases.[6] Many authorities feel that it is fruitless to attempt to replace iron stores and one should be satisfied with correcting the anemia. However, since iron stores form a first line of defense against blood loss anemia, we have been attempting to provide some storage iron by continuing iron therapy for about three months after the anemia has been corrected.

Iron is an inexpensive therapeutic tool and one which has very little acute or chronic toxicity. In the dosage advised, the only complaint some patients may offer against iron salts is an uncomfortable sensation of gastric burning after ingestion. This will often be relieved, with small sacrifice in efficiency of absorption, by allowing the patient to take his pills after eating. Some authors report that the more expensive ferrous gluconate has less gastro-intestinal toxicity than ferrous sulfate,[8] so such a switch could be made if necessary. It should be realized that iron in large dosage is not innocuous[15] and has been a cause of death in children. There is also one notable case of death in a young adult following ingestion of 1/4 pound of ferrous sulfate in aqueous suspension.[32] There is a better than 50 fold margin between therapeutic and lethal dosage of iron salts.

Parenteral iron is a frequently misused preparation. This is quite unfortunate when one considers its expense, difficulty of administration, and rather high incidence of toxic reaction. Still there are cases in which parenteral iron is indicated. Certain diseases of the gastro-intestinal tract such as peptic ulcer, ulcerative colitis, and regional enteritis may be adversely affected by oral iron and require parenteral administration for correction of anemia. Iron absorption is notably poor from the gastro-intestinal tract in the sprue syndrome. Other cases of iron absorptive defects have been reported[29] but such cases are generally poorly documented. Cases in which iron deficiency anemia is said to fail to respond to oral iron are usually due to an incorrect diagnosis as to the cause of the anemia. A third situation in which parenteral iron may be justified is in those persons, who, for one reason or another, will not tolerate oral iron. Even then, one should not resort to parenteral iron until several different oral preparations have been tried. The intravenous

iron preparations until recently had been the only available parenteral drugs. These drugs resulted in a high incidence of toxicity and several deaths. In the past two years an iron dextran complex of low molecular weight and containing 50 mgm. of elemental iron per milliliter of solution has been available for intramuscular use.* This preparation has been said to be free of local and systemic toxicity when given deep intramuscularly, and is quite effective in dosage of 100 mgm. twice daily.[17] At present it seems the treatment of choice in the rare instances when parenteral iron is necessary. The question of total dosage of parenteral iron is quite important and a formula for determining such dosage is presented: (Normal hemoglobin—pre-treatment hemoglobin) x 0.255 = Iron dosage in grams.[18] This formula provides for restoration of hemoglobin and reconstitution of iron stores.

In closing, it is fitting to comment on the all too frequent practice of using iron as a panacea for all anemias. Iron administration will restore hemoglobin levels to normal only in those cases in which iron is specifically lacking, *e.g.,* in anemias due to blood loss. Its use in other anemias is a waste of the patient's time and money, as well as being of potential danger.[38] There is some evidence to suggest that anemia of any type will increase the gastrointestinal absorption of iron.[31,35,36] Also there are cases reported in which oral iron given over a period of many years to persons who were mildly anemic but not iron deficient resulted in hemochromatosis.[21,22] Although the rarity of such cases is obvious, the fact that such serious events can result from indiscriminate use of iron therapy serves to emphasize the importance of using this therapy only when the body stores of iron are manifestly deficient.

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Relieves Scleroderma Symptoms

A new hormone that prevents premature birth is also useful in the treatment of a rare skin disease, scleroderma according to two Florida physicians. The hormone is relaxin (Releasin), which is synthesized from an extract of the ovaries of pregnant sows. Working with other hormones, relaxin influences the contraction of the uterus in pregnancy and labor. It also has an effect on the elasticity of the skin. This effect is important in the treatment of scleroderma, Drs. Gus G. Casten and Robert J. Boucek, Miami, said in the January 25 Journal of the American Medical Association.

In scleroderma, the skin hardens, restricting movement. The blood supply is cut off, causing fingers, toes, and ankles to ulcerate. In addition to affecting the skin, the disease eventually attacks the internal organs.

The Florida doctors gave relaxin to 23 patients. While it had no effect on the disease itself, it did cause "significant improvement" in skin tightness, blood flow in the extremities, and ulceration. In fact, several patients improved enough to return to work.

The doctors concluded that relaxin represents a "significant advance" in the treatment of scleroderma.

Renal Complications In Gout

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THE EFFECTIVE MANAGEMENT of the patient with chronic renal disease is often one of the most frustrating experiences in clinical medicine. All too often, the patient is found to have such extensive kidney damage that effective therapy is quite limited or even impossible. Accordingly, there has been increasing emphasis on better care of early renal and other urinary tract disease in the hope of decreasing the incidence of chronic renal disabilities. It is the purpose of this report to suggest that the urinary complications associated with gout can be detected early and be better controlled.

Gout has been recognized as a definite clinical entity for many centuries.[1,2] That some type of renal damage may often be associated with gout has also been recognized for sometime[3], but has not been given the attention it deserves. It has only been in recent years, beginning largely with the studies of Schnitker and Richter in 1936[4], that critical attention has been focused on the nature of renal lesions. More recently, there has been renewed interest in studying this aspect of the disase.[5,6]

In an attempt to discover what urinary tract abnormalities might be evident or appreciated in a series of patients with gouty arthritis, a review was made of all such cases seen at the McGuire Veterans Hospital during a 5 year period, 1952 through 1956. The cases accepted for study were required to meet at least 2 of the following 3 criteria: a typical clinical course, a definite and prompt therapeutic response to colchicine or a hyperuricemia manifested by a serum uric acid level of 6 mg.% or above. The murexide test, a chemical method of establishing the urate composition of a suspected tophus, is said to be pathognomonic of gout when positive, and was considered so in this series. Cases of gout secondary to other diseases such as the polycythemias, leukemias, hemolytic anemias or lymphomas and those secondary to therapy, such as vitamin B-12 or pyrazinamide (PZA) were not included in this study. Of 122 case records reviewed, 90 appeared to have a diagnosis of gout firmly established. The group consisted of 88 males and 2 females. Seventy-four were white and 16 Negro, this being against a popular concept that gout is uncommon in the Negro race. The age range was between 28 and 88 years with the average being 49.5 years. The patients had suffered from gouty arthritis for an average of 6.5 years. Fifty-six patients were definitely obese and 26 admitted excessive use of alcohol. This series would appear representative of those reported by others.[1,5]

Twelve cases out of the 90 presented renal abnormalities which could not definitely be explained on any other basis. No cases with other diseases likely to present renal abnormalities were included. A diagnosis of gout was above suspicion in each case and this group of twelve had the most consistent hyperuricemias. Only 1 patient at any time failed to have a serum uric acid above 6 mg.%. Almost 20% of the entire group of those with gout at some time exhibited a normal uric acid level. Otherwise, the group demonstrated no statistical differences of any significance. The age, sex, race, duration of disease, dietary habits and alcoholic consumption were quite comparable to the total group.

The available data from these cases are summarized in the accompanying table. It will be noted that renal calculi occurred in 5 patients and, in at least 4, these developed before the articular symptoms. Two of these had evidence of urinary tract infection and, of the 3 checked, all had azotemia. The remaining 7 patients all had significant abnormalities such as azotemia, proteinuria, abnormal urinary sediment or altered renal function studies. Half of the patients had hypertension as opposed to 24.4% for the entire group. The poorly understood relationship of gout and hypertension has been previously noted[7] and will be discussed later.

A group of 90 patients falling into the same average age distribution was selected for controls. These were patients treated on the Medical Service of the McGuire Veterans Hospital during the month of June, 1957 for diseases in which no renal complications were anticipated. Of these, 5 patients presented renal abnormalities, less than 50% of those in the group of patients with gout. These findings

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were minor and consisted of 4 cases of asymptomatic pyuria and 1 of asymptomatic albuminuria, all of whom demonstrated no other abnormal findings. Eight other patients were hypertensive, a considerably lower incidence than in those with gout.

DISCUSSION

The variety of findings presented serves to underscore the difficulties encountered in delineating the pathogenesis of gouty nephropathy. First, one must exclude the possibility of some other type of renal disease producing hyperuricemia and secondary gout. Most workers feel that this is a very rare occurrence[8] but at times the possibility is difficult to exclude. A familial history of gout, the presence of tophi, the existence of articular disease before the onset of renal insufficiency and a degree of renal failure insufficient to produce hyperuricemia are clinical features which may be of some value in reaching a decision. Second, the vascular component of the disease is poorly understood. Earlier workers felt that hypertension with resulting nephrosclerosis was primarily at fault.[4,7] Current opinion favors the concept that patients with gout have earlier vascular degeneration.[3] Actual urate deposition in the intima of arteries has been demonstrated.[9] It is further felt that the vascular changes become severe only after the kidneys have been damaged by the primary disease.[3]

What, then, is the probable sequence of events in gouty nephropathy? It must be recalled that gout is a systemic metabolic defect interfering with normal purine metabolism; it is not just an articular disease. The metabolic defect remains unknown but as a result the miscible uric acid pool is increased from a normal of about 1 gm. up to even 20 or 30 gms.[3] In the early stages, prior to renal damage, a urate diuresis occurs but is unable to compensate completely and the miscible pool remains abnormally large. The serum uric acid level rises and above the level of about 6.5 mg.%, it becomes very unstable and is apt to precipitate out as sodium urate, particularly in the peri articular tissues and in the kidneys.[3] The site of deposition in the kidneys remains unsettled. It was originally considered that urate deposition occurred in the interstitial tissues with resulting compression and damage of the nephrons. Many still feel this to be correct, even if only a partial explanation.[3,6] Most recent work has suggested that the basic lesion is one of urate deposition in the collecting tubules[12-17] with proximal hydronephrosis, pyelonephritis and damage to the respective glomeruli. There is progessive interstitial fibrosis and the involved glomeruli become hyalinized and fibrosed. The tubular epithelium disappears and the microscopic section gives the appearance of interstitial deposition. It is well appreciated that often the urate deposits occur as pelvic deposits and that calcium salts are at times incorporated into the formation of mixed calculi.

Despite the work accomplished, there is still much to be done to clarify the nature of the gouty kidney. Brown and Mallory[13] and Mayne[14], among others, have reported careful autopsy studies but few other reports are available. The use of the renal biopsy technique would appear to be of much potential value but has been little used so far. However, even where more specialized studies are not available, the routinely employed renal function tests may yield much valuable information, not only as to the presence, extent or progression of nephropathy, but also as to evidence of possible improvement of renal function. Phillips[17] has suggested that improvement can be anticipated after the institution of appropriate therapy and, if his experience is confirmed, the practitioner will be presented the unique experience of being able to reverse chronic renal disease.

While the exact nature of the kidney pathology remains to be clarified, there is little disagreement as to the proper management of the asymptomatic gouty patient, whether he does or does not have urinary complications.[2,10,18,19] The usual practice of severe limitation of purine and fat intake has recently been questioned because the dietary intake appears to have little effect on the uric acid pool.[10,18,19] However, there is the repeated clinical observation that certain indiscretions of diet and alcohol precipitate episodes of gouty arthritis. As Talbott[2] has suggested, it still appears entirely reasonable to restrict alcohol, high purine content foods, or any other foods which appear to "trigger" attacks. While at the present time there is no available means of correcting the defect which results in the increased production of uric acid, there is the possibility of producing a urate diuresis. There does not appear to be a renal defect in excretion of uric acid, and barring the appearance of renal injury, there does at times appear to be a urate diuresis.[11] Various drugs can be used to block the renal tubular transport mechanism whereby urates are normally actively reabsorbed. These include the salicylates and probenecid (Benemid). It is now a generally accepted therapy to use one of these agents. Salicylates in a daily dosage of 4-5 gms. are effective. Generally

DATA OF PATIENTS WITH GOUTY ARTHRITIS AND RENAL COMPLICATIONS

	Age	Duration of Disease	Serum Uric Acid (mg. %)	Average B.P.	Proteinuria	Urinary Sediment	Random S.G.	Maximum Conc.	BUN mg. %	Urea Clearance	PSP (15 min.)	IVP Excretion	Urinary Calculi
1	71	2 yrs.	7.4	120/85	3 plus	Many WBC's & RBC's	1.017		28			Normal	30 year history of renal colic. One uric acid stone recovered
2	42	10 yrs.	7.0	130/80	1 plus	Normal	1.025						Calculus, type unknown, removed from left ureter 11 years previously.
3	65	1 wk.	8.0	120/70	2 plus	Many WBC's & RBC's	1.012	1.015	20		5%	Poor excretion bilaterally	Negative shadows in renal pelvis. 20 year history of renal colic with recovery of uric acid crystals.
4	60	1 wk.	8.8	120/70	0	Normal	1.020		25			Poor excretion bilat.	Calculus in right renal pelvis.
5	49	10 yrs.	7.5	140/90	0	Normal	1.013						Calculus in left pelvis.
6	59	10 yrs.	7.6	200/120	0	Uric acid crystals	1.011	1.018	28	60%	5%		
7	43	6 mos.	8.0	140/100	1 plus	Occasional WBC's	1.010	1.010	50	15%	5%	No excretion bilat.	
8	61	13 yrs.	7.6	220/120	2 plus	Occasional granular casts	1.019	1.019	23		10%	Poor excretion bilat.	
9	32	11 yrs.	5.1	180/110	4 plus	Many WBC's & granular casts	1.024		12	92%	15%	Normal	
10	61	1 yr.	9.1	180/120	1 plus	Few WBC's & rare RBC	1.014	1.016	31	45%	10%		
11	33	9 yrs.	7.7	130/70	Trace	Normal	1.007		34				
12	40	5 yrs.	8.4	150/100	Trace	Uric acid crystals	1.010	1.025	17	56%	10%	Sl. diminished bilat.	

preferred, however, is probenecid in a dosage of 1-2 gms. a day. Certain precautions must be exercised with this agent. There is some danger of urate calculi forming in the urinary tract during the first few days of therapy. It appears desirable to use only about .5 gm. of probenecid daily for about the first 2 weeks and to alkalinize the urine. Fluids must be forced throughout therapy. Occasionally, exacerbations of gouty arthritis occur with institution of this drug but it is rarely necessary to discontinue it temporarily. Such attacks should be managed as any others with colchicine or, if this fails, with a brief course of either phenylbutazone (Butazolidin) or one of the adrenal steroid preparations. Concomitant administration of colchicine, .6mg. 1 to 4 times daily, is recommended by many.[2,19] It has

been noted that salicylates to some extent block the action of probenecid but this action does not appear to be as great as formerly considered.[10] It appears desirable to limit salicylate intake to a minimum in order to obtain the maximum uricosuric effect from probenecid.

Management of the patient with hyperuricemia alone is a moot question. Excellent studies have confirmed the familial nature of the disease and the fact that many asymptomatic relatives of those with gouty arthritis have hyperuricemia.[20,21] Perhaps the period of hyperuricemia preceding the onset of symptoms is the period during which the renal damage begins. If this be so, and it was strongly suggested in 4 cases in this series, then it may well be desirable to screen more carefully the families of those with known gout and actively treat those who have hyperuricemia. On the basis of present information this does not now appear indicated[10] but the problem merits further study.

CONCLUSIONS

1. Gouty nephropathy probably is not as rare as usually considered. The observation of renal abnormalities in 12 out of a total of 90 consecutive cases of gout would suggest that this is so. A comparable control group revealed a much lower incidence of renal abnormalities.

2. Nephropathy may be manifested clinically by azotemia, proteinuria, hematuria, pyuria and other abnormal urinary sediment, abnormal urinary function tests and by the formation of urinary calculi. The basic pathological process appears to be one of urate deposition, primarily in the collecting tubules. Many questions remain unanswered, however, and further study is needed. Renal biopsy might become the source of much valuable information.

3. Gout is more than an arthritic disease. Through an hereditary metabolic defect the uric acid pool is increased, leading to its precipitation in many tissues. The joints and kidneys appear to be particularly susceptible to this deposition.

4. Adequate long-term management of gout includes the use of a uricosuric agent, not only for the better control of joint symptoms but for the prevention and control of renal complications. Other less important therapeutic approaches include purine restriction and increased fluid intake.

5. The desirability of treating those with asymptomatic hyperuricemia is at present purely speculative but deserves further attention.

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Aplastic Anemia

A Clinical Analysis of 50 Patients

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APLASTIC ANEMIA (bone marrow failure, hypoplastic anemia, refractory anemia) was first described in 1888 by Ehrlich[1] and is an ever recurring problem in hematology. It is unclear whether patients with this type of anemia form a heterogenous group or represent variations of a single disturbance. The one feature that all patients with this diagnosis have in common is defective blood production. This is usually manifested by a pancytopenia but occasionally only the red cells are involved.[2] The bone marrow is usually hypocellular but may be normocellular or even hypercellular.[3] We have reviewed the clinical course of 50 patients with aplastic anemia seen at the University of Virginia Hospital between the years 1933 and 1956 and an analysis of certain features of their illness forms the basis for this report. A more detailed analysis of these cases has been reported previously[4] and other reviews of this type of anemia have appeared in the literature.[5-12]

INCIDENCE

The age at the onset of illness varied from 4 years to 82 years with an average age of 43 years. Forty-six per cent of the patients had the onset of their illness after the age of 50 years. Thirty-five of the patients were men and 15 were women. There were only 2 Negroes in the group. Seven patients were thought to have their anemia due to toxic exposure (benzol-3, phenylbutazone-1, mesantoin-1, chloramphenicol-1, and arsenic-1) while in the other 43 the cause was unknown. Although 9 patients gave a family history of anemia, there were only 2 patients with a documented family history for aplastic anemia. This occurred in 2 brothers with Fanconi's syndrome (congenital hypoplastic anemia associated with other developmental defects).

PHYSICAL EXAMINATION

Twenty-four per cent of the patients had grayish-brown pigmentation of the skin and an additional 5 patients in the younger age group (8 to 16 years) had scattered areas of light brown pigmentation (café au lait spots). Forty-eight per cent of the patients had purpura or petechiae and all of these had thrombocytopenia. Thirty-six per cent had retinal hemorrhages and 2 of these had normal platelet counts and blood pressure. Significant lymphadenopathy was detected in 24 per cent, splenomegaly in 34 per cent, and hepatomegaly in 32 per cent. Testicular atrophy was present in 24 per cent of the men. A possible explanation for the higher incidence of brown pigmentation of the skin, lymphadenopathy, hepatosplenomegaly, and testicular atrophy in this series than in most series previously reported may be the greater use of transfusions in recent years, as half of the autopsied patients showed an increased amount of hemosiderin in the tissues.[4]

HEMATOLOGIC OBSERVATIONS

The peripheral blood showed pancytopenia in 37 patients, anemia alone in 7, anemia and leukopenia in 4, and anemia and thrombocytopenia in 2. Thirty-two patients had a macrocytic anemia (MCV greater than 93 cu. microns) and in 10 patients the anemia was normocytic (MCV 81 to 93 cu. microns). None had a microcytic anemia (MCV less than 81 cu. microns). Forty-three patients had an increased percentage of lymphocytes (over 40 per cent) in their peripheral blood. This was a relative lymphocytosis in 37 and an absolute increase in lymphocytes (over 3,000 per cu.mm.) in 6. Although 41 patients had leukopenia, only 5 had an absolute decrease in lymphocytes (less than 1,500 per cu. mm.). It was not uncommon in this series of patients to

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have an increased percentage of reticulocytes. Eleven patients had reticulocyte counts greater than 5 per cent, 10 ranging from 2 per cent to 5 per cent, and 29 with counts below 2 per cent. Only 9 patients had reticulocyte counts that were consistently 0.1 per cent or less. Fourteen patients had four day fecal urobilinogen determinations and 8 of these showed an elevated fecal urobilinogen. It was felt that these patients had a hemolytic element to their anemia but that decreased blood production was the main defect.

Bone marrow aspiration was performed on every patient. Thirty-seven patients presented with a hypocellular bone marrow but 3 of these latter became hypercellular and 3 became normocellular. The cellularity of the bone marrow was normal in 8 patients but 2 of these showed erythroid hypoplasia and 3 later became hypocellular. Five patients presented with a hypercellular bone marrow one of which later became hypocellular. Differential bone marrow counts were available in 37 patients which showed more than 20 per cent lymphocytes in 27, more than 50 per cent lymphocytes in 8, and in 1 patient the increase was as high as 94 per cent.

PROGNOSIS

The duration of illness correlated with the presenting type of peripheral blood. The duration of illness of the 15 patients still living varies from 21 months to 18 years. Nine patients have had their illness from 1 to 3 years, 3 more than 5 years, and 1 more than 10 years. The duration of survival of the 35 patients who have died varied from 5 weeks to 20 years. Twelve patients lived less than a year from the onset of their illness while 15 survived more than 3 years, 8 more than 5 years, and 4 more than 10 years. Patients with anemia alone had the most favorable prognosis while patients with pancytopenia had the worst. All 7 patients with anemia alone survived more than a year, 5 more than 3 years, 4 more than 5 years, and 2 more than 10 years. All of the 12 patients who died in less than a year had pancytopenia but it is important to note that 6 of the 37 patients who presented with pancytopenia lived longer than 5 years.

Six patients had complete remissions with return of blood values to normal. All of these patients are still living with remissions lasting from 8 months to 3 years. Four patients had their remissions after corticosteroid therapy but 2 of these whose anemia was thought to be due to exposure to phenylbutazone and mesantoin might well have had a remission without steroid therapy as a result of withdrawing the suspected agent. Another patient had a complete remission after splenectomy and the sixth had a spontaneous remission.

Six patients had a partial or temporary remission. Two of these had spontaneous remissions lasting 4 and 12 years respectively but relapsed and died of their disease. The third responded to prednisone therapy with a return of blood values to normal but relapsed when the drug was discontinued and failed to respond when it was reinstituted. The fourth after being anemic for 11 years during which time he received 397 transfusions was then treated with cortisone and although his red cell values never returned to normal he no longer needed transfusions and returned to a normal life. The fifth after having pancytopenia for 3 years and receiving 21 transfusions went 17 years without transfusions although there was only slight improvement in his blood values; he then developed severe pancytopenia and died of his disease in 5 months in spite of multiple transfusions. The sixth had a complete remission lasting 2 years following therapy with intramuscular crude liver extract but then relapsed, failed to respond to liver in any form and died 4 years later of his disease. It is of interest that 4 of the 7 patients who had anemia alone had either a partial or complete remission while this occurred in only 7 of the 37 patients with pancytopenia.

Infection accounted for the largest number of deaths for the whole group, 11 of 35 or 31.4 per cent. Hemorrhage was the most common cause in those with thrombocytopenia, 9 of 28. A combination of hemorrhage and infection accounted for the death of 6 patients all of whom had pancytopenia One patient who had an illness for 4½ years developed acute myelocytic leukemia during the last 6 weeks of his life. He was the only patient in this series who developed leukemia.

TREATMENT

The treatment of aplastic anemia has been mainly unsatisfactory and although a wide variety of therapeutic agents have been tried, there have been only a few scattered reports of success. The most effective form of treatment is the withdrawal of the offending toxic agent when such a history can be elicited. The mainstays of treatment at the present time for the idiopathic cases are tranfusions, corticosteriods,[12-19] and splenectomy.[15-18] Vitamin preparations such as B-12 and folic acid have not been effective and iron therapy is not only useless but increases the danger

of exogenous hemocromatosis which these patients are prone to develop due to the multiple transfusions they receive.[4 19]

Thirty-four patients were treated with corticosteroids either in the form of cortisone or prednisone. Six patients had a complete or partial remission, 9 patients showed improvement in some feature of their illness, and 19 showed no response. Of the 5 patients with anemia alone who were treated with corticosteroids, 3 had a remission while only 3 of the other 29 had a remission. Four of the 6 patients who had a remission recovered completely while 1 patient had a temporary remission and another was greatly improved requiring no more transfusions but the blood values never returned to normal. Of the 9 patients who showed some improvement, 3 had a decrease in their bleeding tendency without a rise in platelet count, 1 had a rise in platelet count, 2 had a rise in leukocyte count, and 3 had a temporary rise in erythrocyte count.

Splenectomy was performed on 5 patients. One patient who had been anemic for 6 years and had received 128 transfusions had a complete remission and had been followed for 3 years with no sign of a relapse. Another had a return of leukocyte and platelet count to normal but showed no improvement in her anemia. The third patient showed only a slight improvement in that transfusions were needed less frequently and the other 2 patients showed no response.

SUMMARY AND CONCLUSIONS

Of the 50 patients with aplastic anemia reviewed, toxic exposure was thought to be the cause in 7 and 43 were idiopathic.

Most of the patients had pancytopenia, a macrocytic anemia, relative lymphocytosis, and a hypocellular bone marrow. However, in 13 the bone marrow was normocellular or hypercellular and 7 patients had anemia that was not associated with leukopenia or thrombocytopenia.

Although the most important factor in the anemia in these patients was deficient erythrocyte production, the presence of an associated hemolytic component manifested by increased fecal urobilinogen excretion and mild reticulocytosis was not unusual.

Brownish-gray skin pigmentation, lymphadenopathy, hepatomegaly and splenomegaly occurred commonly in patients who received multiple transfusions.

The prognosis was most favorable in patients with anemia alone and in those with a hypercellular bone marrow. However, an illness of long duration was not uncommon in those with pancytopenia and a hypocellular bone marrow.

A complete remission occurred in 6 patients and a partial or temporary remission in another 6 patients. Both the spontaneous remissions and those that followed corticosteroid therapy and splenectomy occurred most often in patients who had anemia alone.

Acknowledgment

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The Weaker Sex

The ladies are now firmly established, statistically, as the stronger sex, according to Dr. Louis I. Dublin, eminent health statistician and health and welfare consultant of the Institute of Life Insurance.

If there were any doubts before, current health and longevity tabulations show that women have not only held their position of advantage of a generation ago, but have made still further gains.

How long one lives is the ultimate measure of health, and on this basis, the ladies are now several years healthier than men. The average length of life of women in the United States is now 73 years. For men it is only 67 years. That is an advantage of 6 years for the women. Both men and women have been adding years to their expectation of life. Since 1900, the gain for the nation as a whole has been 22 years. But the women's expectation of life has increased 25 years in this period, while that for men has risen only 20 years.

The female health record is better than that for males at all age brackets. More boy babies are born than girl babies, but apparently that is nature's answer to the male's poorer life outlook. Because almost immediately, the female infant records a better survival rate, and by teen-age the girls are approaching the period when they have their best hold on life, and when they show the greatest advantage over the male group. For the 15 to 24 group, the male death rate is now three times that for females. This is a great gain over the record only 15 years ago, when the male death rate of this age group was less than one and one-half times that for females.

The greater relative gains shown by females at the younger ages have carried more women on to the older age groups—where women have an additional advantage over men. The woman of 65, for instance, has an expectation of 16 more years, while the man of that age can expect about 13 years.

This greater life expectancy of women is reflected through almost the entire range of diseases or disability. Women show lower death rates than men from almost all of the major causes of death—all, in fact, with the single exception of diabetes. This has not always been true. Prior to 1945, women showed a higher cancer death rate than men. In the past 15 years, while the cancer death rate for women at most ages has declined 10 per cent, that for men has increased. In fact, the mortality rate among men for lung cancer has increased 180 per cent, in this period.

Women apparently don't gamble with their lives as much as men, the female death rate for accidents being less than half that for men. In heart and circulatory disease, which accounts for half of all deaths, the female death rate is less than two-thirds that for males. Even in the infections, such as influenza and pneumonia, women show a death rate one-third less than men.

A Strange Antacid—Hydrochloric Acid!

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SOME YEARS AGO a distinguished professor of medicine, whose name and work are known throughout the English-speaking world (I mention these facts for a reason) told me he had been having some digestive troubles and asked me to do a fractional test-meal test on him. I knew he was also, at that time, in the midst of marital difficulties.

When, later, I told him that his acidity was well over 100, in fact, the highest I had seen in many hundreds of such tests, he was astonished, because, he said "one of the things that relieves my indigestion is dilute hydrochloric acid!" Some weeks later appendectomy relieved his symptoms. This is one of the few instances in which we can because of the patient's calling, put reliance on his clinical history.

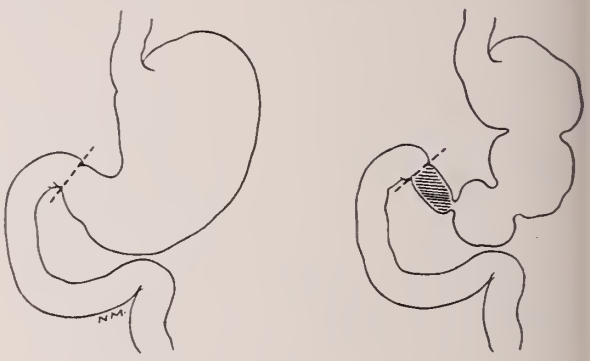
This case points up a common misunderstanding of the term "hyperacidity". From our own and others' experiences we can state:

1. That the range of gastric acidity following test-meals in healthy medical students, free of digestive or other symptoms, is as wide as in disease of the stomach, local or reflex. Achlorhydria is present in about 5 per cent, and hyperchlorhydria in about 2 per cent of healthy students. These two conditions therefore cannot be regarded as pathological.

2. When hydrochloric acid is introduced into healthy stomachs through a stomach tube, in amounts and concentration sufficient, or more than sufficient, to produce "hyperacidity", no pain or discomfort is experienced. Hyperacidity, per se, does not cause pain. This is not true in people with peptic ulcer.

The most satisfactory explanation of the association of hyperacidity, stomach pain several hours after meals, and relief of pain by food, alkalis (and, sometimes, even by dilute hydrochloric acid) would seem to be that put forward by Hurst in 1925[1] and may be stated as follows:

Pain in hollow organs, apart from organic disease, is brought about by any condition which raises the tension or pressure within the lumen of that organ beyond a certain limit. In the case of the stomach, one form of pain is that which occurs when the organ is of the hypertonic, hyperperistaltic type, and, when nearly empty of food, develops a pyloric or prepyloric spasm (reflex or direct). The small volume of food contents is then being squeezed between the closed pylorus distally, and a peristaltic wave passing down the stomach and so deep as actually to occlude the gastric lumen proximally.



To illustrate mechanism of production of late gastric pain (Hurst).

Under these circumstances:

(a) The normal intermittent regurgitation of duodenal contents into the stomach (which thus dilutes, neutralizes and "regulates" gastric acid) does not occur or is diminished. Gastric acidity therefore remains high.

(b) Relief of pain is achieved by reducing the intragastric tension by either, 1. relaxing the pyloric or prepyloric reflex muscle spasm (appendectomy, cholecystectomy, etc.); 2. making a gastrojejunostomy; or 3. relaxing the hypertonic, hyperperistaltic stomach (the reflex relaxation brought about by the introduction of bulk into the stomach—food, fluid, alkalis or even a volume of dilute hydrochloric acid).

CONCLUSIONS

High acidity of the gastric contents does not, per se, cause pain in non-ulcerated stomachs. Hyperacidity results when duodenal regurgitation is prevented or diminished, e.g., in a rapidly emptying, hypertonic, hyperperistaltic stomach, or in pyloric obstruction. "Late" gastric pain occurs when a small volume of gastric contents is imprisoned and under pressure by a closed pylorus in front and a deep occluding peristaltic wave behind. Relief of pain occurs when the pressure is relieved by relaxing the stomach by food, fluid, alkalis and even dilute acid.

1. Hurst, A. F. Brit. Med. J. 1925. 1. 145.

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Therapy for Suicidal Patients

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SUICIDE has a personal significance for all of us. No one of us can be sure that he will not contribute to this 11th cause of death. Although we have erected a series of legal, cultural and religious prohibitions to suicide, they only emphasize our tendency toward such an act. Suicide accounts for about 17,000 deaths a year in the general population of the United States. In white males from ages of 15 to 44, suicide is the 5th cause of death. Physicians kill themselves more frequently than other males; seven of the early leaders in psychoanalysis committed suicide. These and similar statistics are shocking when we realize that they cover the smallest and least representative number of suicides. A great many suicides are concealed. Suicidal intent in auto accidents is not questioned. Deaths following complications of suicide attempts are rarely recorded as suicide. Suicidal attempts—no matter how serious—are never recorded in tables of vital statistics. There is a concept of "partial suicide" where death does not occur but which consists of self-destructive actions carried out as self-punishment. The underlying unconscious mechanisms are identical with those of suicide. In such a sense, chronic alcoholism can be called chronic suicide. The escape into addiction, follows, rather than precipitates an unconscious desire to abandon the struggle of life. Most patients sometime during the psychotherapeutic process will reveal suicidal thoughts. I believe there is a latent tendency to suicide present in all of us.

Zilboorg[1], a psychoanalyst who concerned himself with the problem of suicide, after a study of institutionalized cases declared that suicide appeared in depressive psychoses, compulsive neuroses and schizophrenia but declared that, "Evidently there is no single clinical entity recognized in psychiatry immune to the suicidal drive. It is to be viewed as a reaction of a developmental nature which is universal and common to the mentally ill of all types and probably also to many so-called normal persons."

Moss and Hamilton[2] reported on 50 hospitalized patients in whom there was no doubt of the intensity of the self-destructive drive. All diagnostic categories of mental illness were included but there was a higher percentage of psychoneurotics and manic-depressives, and a lower precentage of schizophrenics as compared with the over-all hospital population. According to them there seemed to coexist three determinates of the act: One, the hope of a permanent reunion in death with the lost loved one, the forcing of attention or satisfaction otherwise unattainable or the pleasure of spite and revenge. A second determinate is murder of self when the frustrating important person cannot be harmed because of the patient's guilt or anxiety or fear. A third determinate is an expression of hopelessness and the relinquishing of any prospect of gaining necessary satisfaction from the present environment.

In this study it was significantly emphasized that a reactivation of the suicidal drive occurs. Four-fifths of their patients, despite therapy of various types, again wished for death on their first day or overnight home visit. One-half of the patients made suicide attempts and some succeeded as soon as they reentered the social environment in which the original attempt occurred.

Although there is no psychiatric entity which does not contribute to the suicidal toll, most suicidal attempts follow a depressive episode. Even when an attempt is not the expression of a genuine wish to die, it has been shown[3] that feelings of depression, self-disgust and self-depreciation are attached to externally oriented reasons before the attempt is made.

Reviews of case histories have shown that warning signs almost always precede suicidal attempts. This contradicts the vague but often heard contention that "those who talk about suicide never kill themselves". A change of mood, with depression prominent, is almost always present before an attempt. Disordered thinking or evidence of a phychosis are not necessarily seen.

The picture of profound depression is readily recognized. The patient is despondent, cheerless, perplexed and recognizes his retardation of thoughts and actions. He has a sense of impending doom, a feeling of fear, a hopeless acquiesence to the forces

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of dreadful fate. His ideas of guilt, self-depreciation and bodily ills (especially of disorders of the G.I. tract) are quite unshakeable. Not only is he depressed and conscious of it but his depression is transmitted to those around him. Everyone recognizes his emotional illness.

Early depression or mild depression is difficult to diagnose. One of the earliest signs is difficulty or loss of interest in reading. It is the result of a generalized loss of interest in everything, preoccupation with one's self, lack of concentration and tendency to daydream. He has vague physical symptoms, feels stale and rundown, complains of poor appetite, weight loss, headache and fatigue. Very likely he has noted that he wakes early, at dawn, feels worse in the morning than at night and his sleep is troubled and restless. He has been avoiding social contacts and stubbornly insisting that if left alone he will do as his friends request and "snap out of it". He believes that his primary disorder is physical and that his "blue and depressed" feeling is secondary. At the same time, he is irritable, gloomy, peevish and quick to take offense. He is easily rejected and the few who seek his company are rebuffed.

When the physician first sees the depressed patient and in subsequent interviews, he should proceed to collect a detailed history of present and past episodes of depressive reactions. The patient is not upset when searching questions are put seriously and sincerely. He responds with gratification, begins to confess with relief, and feels that a bond of communication has been established with the doctor. This history aims at understanding completely both the precipitating factors and the patient's everyday environmental stresses. The history seeks out a developmental pattern which is being currently repeated. Direct questioning about suicidal thoughts does not lead a person to suicide but permits him to unburden, gain relief, admit that he is frightened and hopeless. An evaluation of the patient's whole life, assets and liabilities is made.

In dealing with the patient, the doctor slowly and cautiously makes the patient aware of hostility, against whom it is directed and how it occurred in a repetitious pattern in the patient's life. Each and every time such statements are made, the patient is reassured that such feelings are usual even about people who are essentially good and loving. One can usually determine against whom the hostility is directed if he can discover who else will be traumatized by the suicide. It is useful to put into words what we can guess the patient thinks. Then the patient can feel the thought has been expressed without his taking direct blame for it. Reassurance of his acceptability and worthwhileness is constantly given. A widely held psychoanalytic belief is that suicide is a form of displacement—a psychological murder—where the desire to kill another, who has thwarted the individual, is turned back on the self. This concept must be vigorously upheld and the patient supported in his attempt to discover the object of his hatred. It aids both patient and therapist to understand a suicidal wish to be a desire to sleep without cares. The therapist must actively intervene in the patient's environment. He must be aware of the emotional, social and cultural forces affecting the patient. He must aid important relatives, friends and employers to understand their own hostility and rejection of the patient and how this affects the patient.

When it is evident that depression is severe, where there is mounting tension with depression, severe retardation, lack of communication, unreasonable loss of anxiety with confusion or excitement, the patient should be referred to a psychiatrist and hospitalized. The expression of a wish to die in an individual with great underlying hostility, with a family history of suicide and whose ego strength (character) is weak, amounts to grave danger.

Electro-shock therapy is the treatment of choice in severe depression or suicidal risk. It is up to 100% effective in so-called "pure depressions". The contraindications are few and the complications minimal. In the cases where EST is used, psychotherapy is usually reserved for environmental changes, counciling on a conscious level, and follow-up periods to avert serious reactivation phenomena. EST serves to aid the patient to re-repress his problems; it is not curative. As yet unknown factors determine whether a depression will result in suicide, a manic attack or recovery.

Adjuncts to psychotherapy include the usage of adequate dosages of ataratics. For example 10 mgm. of Thorazine T.I.D. is generally useless and dosages ranging up to 1000 mgm. per day should be instituted to be genuinely effective. Sedation is important. Here one uses a risky procedure and must take precautions not to give a means of suicide to a potential victim. Nevertheless, a good sound night's sleep is of utmost importance to the patient. Bluntly stated, anyone can find a means of killing himself if he so desires. The use of stimulants in depression has always seemed to be a matter of "flogging

a tired horse". In many states the stimulation is useful; in the retardation of depression, it is not.

Medications which alter the mood including tranquilizers and especially reserpine often serve to depress the patient. There is a growing recognition of the value of certain ataratics in certain psychopathological states. For example, Thorazine will be useful when hostility is obvious, or Miltown when tension or anxiety are uppermost. As yet it is impossible to utilize a specific ataratic for a specific symptom complex.

SUMMARY

Even though the suicide rate has been decreasing, suicide claims 17,000 lives in the United States annually. The problem of preventing suicides is of major significance. Suicide deaths can be diminished by recognition of the warning signs, psychological mechanisms, and prompt, sincere treatment of depressed individuals. Referral to a psychiatrist is urged when depression is increasing, hostility is not expressed and the patient expresses a wish to die. After a suicide attempt has been made there is almost always a reactivation of the wish to die frequently accompanied by an attempt. Sedatives and ataratics have a more important function than stimulants, but drugs can only supplement psychotherapy and the manipulation of significant extrinsic factors.

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2. Moss, L. M., and Hamilton, D. M.: Psychotherapy of the Suicidal Patient. Am. J. Psych. 12: 814-820, 1956.
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Medical Ethics and Etiquette Exhibit

The Medical School Library of the University of Virginia is exhibiting library materials on Medical Ethics and Etiquette. The display will be up from February 5th to April.

The exhibit includes the two oaths of Hippocrates, the pagan and the Christian. Hippocrates' works including his Decorum, Law and Precepts may also be seen to illustrate further his views on the subject.

Sir Thomas Percival's Medical Ethics of the 18th century shows the British interest in the subject. In the 19th century regional groups in the United States began to adopt codes of ethics—the New York State Medical Society in 1823 and the Medico-Chirurgical Society of Baltimore in 1832, to mention two. Dr. Samuel Brown of Kentucky thought he could improve conditions by organizing a secret fraternity of the better physicians and by promoting high moral ideals in it. An article on this fraternity, if a bit facetious, is included in the exhibit.

The chief business of the first real meeting of the American Medical Association in Philadelphia in 1847 was the formulation of a Code of Ethics. Various changes have been made in this over the ensuing years. Several of these codes are available for perusal. The latest, a much shorter form, was formulated in the last year. Articles about doctor-doctor relationships and doctor-patient relationships are covered, some from the layman's point of view. The interrelationship between patient, physician and theologians is also touched upon. There is a lengthy book which covers only the Catholic viewpoint in medical ethics.

There are codes of ethics for nurses, physical therapists, hospital administrators and others. There is even a suggested code for medical students. The library is able to show articles on several recent foreign codes—the French and the Egyptian—for contrast.

The creed of at least one individual on the subject is included. This type is often distributed among graduates of medical schools, as we understand was done at Medical College of Virginia last year.

A Biblical Prescription for Use in the Treatment of Sickness

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ALWAYS have I felt that somewhere in the Bible one must surely find a program or a prescription, outlining the ideal course to be followed by those charged with responsibility of administering to the sick, whether the sickness be physical, mental, or spiritual. My belief was confirmed and my search was rewarded when recently it was my good fortune to read an interpretative study of James 5:13-16a, included in a report by the Permanent Committee on Christianity and Health as made to the 1957 General Assembly of the Presbyterian Church in the United States. This report notes and comments on five specific steps which, according to St. James, should be taken by and for the sick:

1. Let the sick person pray.
2. Let the sick person pray the prayer of faith.
3. Let the sick person call for the Elders in the Church.
4. Let there be confession of sins, one to another.
5. Let the sick person be anointed with oil.

Immediately, an analysis of the foregoing five recommendations reveals that the first four involve spiritual therapy, while the fifth is clearly symbolical of the part played by the physician and by those procedures now used in the treatment of sickness, be the procedure medical, surgical, or psychiatric. Further, one distinctly gets the impression that if the physician wishes to make available to the sick person *all* the essentials necessary to restore health, then it is incumbent upon him, in a supervisory capacity, at least to suggest that the first four be carried out even as he himself specifically attends to the fifth recommendation.

The interpretative study to which I refer is so logical, so practical, so inspiring—so expressive of my own convictions in the matter— that I wish to include a condensed report as published in the July, 1957, issue of *The Christian Observer*. The report follows:

1. *Let the Sick Person Pray*

James' first recommendation for the suffering person is, "Let him pray." For what should prayer be made in time of sickness? Of course it is natural and inevitable that petition should be made for restoration of health; "Let this cup of suffering pass from me!" But it must be remembered that real prayer goes on to add, "Nevertheless, not as I will, but as Thou wilt." The true purpose of prayer is not to persuade God to change His plans, but rather, being convinced of the wisdom and love of God, and knowing that He alone is deserving of our unconditional trust, we therefore submit ourselves to Him, saying, "Thy Kingdom (or rule) come. Thy will be done." Should we be unwilling to submit to God's rule over us, such resistance unfits us to receive physical and spiritual blessings from Him.

Once this fundamental truth about prayer is accepted, we may go on to describe the role of prayer in the maintenance and restoration of health.

Prayer is the means by which fellowship with God is maintained. Without such fellowship harmonious relations with other people are unlikely, and harmonious functioning of the various parts of the self —mind, will, emotions, glands and organs of the body—becomes an impossibility. Daily prayer, therefore, plays an important role in prevention of conflicts which lead to sickness even when we are healthy and cheerful. In times of suffering it is particularly important and appropriate that the child of God be aware of the presence of his Heavenly Father, of whose love he is assured. It makes a great deal of difference whether the sick person believes himself to be fighting a lone battle for health in an alien universe, or whether he is conscious of a divine presence, supplementing and reinforcing the work of the doctor with invisible and immeasurable power.

Prayer is the means by which we surrender all negative emotions or attitudes which might hinder the effective release of the healing forces that God has put into human body and with which the doctor only cooperates. Through prayer we push self aside as the controlling center of life and realign ourselves with God and His purposes for us. In so far as we cease all rebellion against God and trust our lives and destinies unreservedly to Him, in so far

as we permit Him to rule over us, in so far as we put ourselves at His disposal, we shall to that extent rid ourselves of damaging emotions and attitudes such as self-centeredness, anxiety, fear, hate, anger, hostility, bitterness, resentment and prejudice.

2. Pray in Faith

Next, James indicates that only the "prayer of faith" will be effective in saving the sick. The faith to which James here makes reference is the faith of the Christian friends of the sick person. Of course, one man's faith can never be employed as a substitute for another man's, but it may often have the effect of inspiring or strengthening the faith of the sick person himself. But what does James mean by "faith?"

Surely he would agree that there must be no doubt in the mind of the person praying about God's power to heal. The Christian should not find it difficult to believe that the God who originally gave life also has power to prolong life by destroying disease. No limitation whatsoever should be placed on the power of the Creator of the ends of the earth.

But it is important to remember that by "faith," James means much more than intellectual assent to a proposition, even to the proposition that "all things are possible with God". James in his second chapter has already made it clear that a faith which does not issue in works profits a man nothing. True Christian faith therefore results in an orderly and disciplined life of obedience to God's laws of health. Neither prayer nor faith would help a sick person recover from the adverse effects of overeating so long as he persisted in gluttony. The prayer of faith for healing can only be prayed by one who avoids a life of over-indulgence and intemperance, by one whose faith proves its genuineness by obedience to God's fundamental laws of health.

3. Let the Sick Person Call for the Elders of the Church

James' next suggestion is that the sick person call for the elders of the church, who will visit him and pray with him. We recognize that visits to the sick can be prolonged to the point of hurting the patient's recovery. We realize that unwise and harmful comments can be made in the patient's hearing. But the practice of medicine can also be carried on in unwise and harmful ways. In neither case do abuses constitute an argument against the validity and helpfulness of the practices themselves. To neglect either is to deprive the patient of resources that have tremendous therapeutic values.

James recognizes that it is usually impractical for an entire congregation to visit a sick member. Hence he suggests that the visit be paid by the elected official representatives of the church. The pastor who is also an Elder, a member of the session who has been freed from worldly cares and avocations, will do much of his visiting of the sick, but James clearly states that this obligation is to be shared by the other Elders also.

Notice that the sick person is to "call for the Elders." He is not to wait passively wondering whether or not Christian friends will happen to learn of his illness. He is to notify the session of his sickness; he is to request a visit.

Whether the pastor visits by himself, or whether other members of the session or congregation make the visit, one of the main purposes should be to let the patient understand that they represent the entire congregation, and that he is not alone in his battle against sickness, but rather is surrounded by the Christian love and affection of the entire brotherhood.

4. "Confess Your Sins to One Another"

James further recommends that those who are sick should confess their sins, in the confidence that God is faithful and just to forgive us. Of course everyone of us, whether sick or well, ought to confess his sins. But since James' reference to confession occurs in a paragraph dealing with the subject of sickness and health, we may be sure that numerous connections between guilt and sickness had come to his attention. Old Testament writers were aware of such connections, and at least twice in His healing ministry, Jesus traces sickness to an unrelieved sense of guilt. So it would appear that an experience of confession, repentance and forgiveness may sometimes be essential to recovery and health.

Protestants who believe in the priesthood of all believers are convinced that ordinarily such confessions should be made directly to God. But if a person feels so alienated from God by his sins that he has difficulty in receiving assurance of pardon, it may be advisable for him to have a spiritual counselor to serve as a witness to this transaction between the soul and God. Although James does not in this passage state to whom confession should be made, and thus leaves us free to choose who may seem best, yet we may suppose that pastors are ordinarily better qualified than others, and our choice ought therefore to fall mainly upon them.

James does not say, nor does the Bible as a whole

teach, that all wickedness is caused by sin, or that healing for the body is always a benefit of the atonement. There may frequently be such connections, but to assert that these relations are always true is to create a needless and harmful sense of guilt in many who are innocent sufferers. It is to arouse expectations and hopes which are unsupported by the Bible. Jesus on at least two occasions confirmed the insight of Job that our suffering is not always in proportion to our sin. The disciples seeing a man blind from his birth asked Jesus, "Who sinned, this man or his parents, that he was born blind?" Jesus answered, "It was not that this man sinned, or his parents. . . ." Again, Jesus taught concerning the eighteen upon whom the tower in Siloam fell, "Do you think that they were worse offenders than all the others who dwelt in Jerusalem? I tell you, no. . . ."

We have now briefly expounded four elements in James' program in behalf of the sick. In all four of these ways, James suggests the importance of non-physical components in sickness. In all of these ways he stresses the importance of spiritual factors in the recovery from disease.

5. *Let the Sick Person be Anointed with Oil*

Finally, James advises that the sick person be anointed (literally "oiled") with oil in the name of the Lord. Interpreting Scripture by Scripture, we note that in Biblical times oil was in common use for medical purposes. According to Isaiah it was used to soften wounds. Hence the good Samaritan, after bandaging the wounds of the victim of the thieves, pours on oil and wine. Of course James does not mean that oil was always to be used, regardless of the nature of the illness. Other medicines were also used in Biblical days. It seems clear that James used oil as typical or representative of all medicines. So we today should not limit ourselves to New Testament medicines; rather we should use prayer in conjunction with the best medical procedures recommended by trained physicians of our day. The point is, James believed there was no conflict between faith in God and the use of medicinal remedies. He taught that prayer should be used in conjunction with the best medicine available.

Such an interpretation of James' words is in complete harmony with the teaching of the rest of the Bible. Whether a healing occurs with or without the help of physicians and medicines, the Bible characteristically credits God with the cure. It knows no tension between these two kinds of cures, because it teaches that all healing is from God.

So James in this passage attaches value to individual and corporate prayer for the sick, to faith, to pastoral visitation of the sick, to confession of sin and forgiveness, and to medicinal helps. But when healing comes, James wants us to understand that it is God who raises up the sick, it is God who heals all our diseases. For it is God who graciously provides all five of these ways by which the human family can be helped in its battle against sickness. To use only some of these, and to neglect others, is to spurn help which God Himself has made available to us.

We may accept every one of James' statements as true, but there is grave danger in accepting them in an unqualified sense apart from the light of other relevant passages of Scripture.

(a) James does not mean to say, and certainly the Bible does not as a whole support the conclusion, that the Lord will always raise up the sick in response to prayers of faith, for then there would be no death. Such a conclusion would be a denial of the Scriptural teaching about human mortality. And were God to answer in the affirmative every sincere prayer offered to Him, He would in effect be abdicating as ruler of the universe and turning its control over to the human race. Prayer should always be presented in the attitude, "Thy will be done."

(b) Moreover, many people today are tempted to invert the Christian scale of values by placing physical health above all other values in importance. To the contrary, the Bible teaches that Christlikeness in character is the pearl of greatest value. The rule of God, not health, wealth and happiness, is to be sought first. Sickness is not therefore necessarily to be regarded as the worst evil; we cannot even say that it is always contrary to the will of God. James in his first chapter writes that the testing of our faith by adversity produces steadfastness, thus enabling us to make progress toward Christian perfection. Sickness and suffering can and often do stimulate our growth toward Christian maturity. "We know that in everything God works for good with those who love Him, who are called according to His purpose". The report ends.

At a time when increasing emphasis is being placed on psychosomatic medicine and with our hospitals and mental institutions filled to capacity, this report comes as a breath of fresh air, not only to those struggling to develop those inner resources so necessary to combat successfully the stresses and strains of life, but also to them who are privileged

to assist in bringing about the restoration of health. Someone has said (and I paraphrase): When illness comes, get in touch with the Great Physician by prayer and with your family physician by telephone. This I believe to be sound, practical advice. I fear, however, that we, as physicians, must confess that we have not been making known to our patients *all* the resources available to us as these resources are outlined so distinctly in this interpretative study. Perhaps, if we will but take the time and manifest the interest to see that this entire program is put into effect in the treatment of illness, we may be able to get more of our patients *totally* well, and eventually we may reap a harvest of lessened congestion in our hospitals, particularly our mental institutions.

It is in this firm conviction that I submit these five recommendations of St. James as "A Biblical Prescription For Use In the Treatment of Sickness."

Lower Insurance Rates

Probably the best way to reduce automobile insurance rates is to teach teen-agers how to drive properly. This would increase the number of accidentless drivers which would help reduce insurance costs.

Writing in the December Today's Health, the American Medical Association's popular health magazine, David Star, Floral Park, N.Y., said training would also help reduce the rising number of fatal accidents involving drivers under 25 years of age.

Yearly 1,600,000 boys and girls reach legal driving age; 728,000 receive no training except what is picked up from friends and relatives.

"If everyone of our 1,600,000 16-year-olds passed a driver training course, we could in a generation put more than 30,000,000 drivers on our highways who had been trained in safe and skillful practices."

Since last February, Michigan has had a law that says no one under 18 can be licensed to drive unless he has passed an approved course of driver instruction. The cost of instruction in the high schools is provided for from licensing fees and the course requires a minimum of 30 hours of classroom instruction and six hours of driving.

Among the subjects taught are the motor vehicle's effect on social and cultural life; the driver's physical requirements, mental attitudes and social responsibilities; characteristics of streets and highways; legal structures and codes; automotive mechanics and maintenance; automotive consumer education, and skills in driving.

"We used to think anyone could just pick up driving, but we now realize that instruction and coaching are just as important in driving as they are in athletics, music, or bridge building. When a youngster just picks up driving, he usually acquires bad attitudes from his parents or other drivers. Faulty attitudes are much more often at the bottom of young driver accidents than lack of skill."

The more young drivers given knowledge and healthy driving attitudes at the beginning of their driving careers, the fewer unsafe drivers of all ages there will be in the years ahead.

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"If everyone of our 1,600,000 16-year-olds passed a driver training course, we could in a generation put more than 30,000,000 drivers on our highways who had been trained in safe and skillful practices."

Since last February, Michigan has had a law that says no one under 18 can be licensed to drive unless he has passed an approved course of driver instruction. The cost of instruction in the high schools is provided for from licensing fees and the course requires a minimum of 30 hours of classroom instruction and six hours of driving.

Among the subjects taught are the motor vehicle's effect on social and cultural life; the driver's physical requirements, mental attitudes and social responsibilities; characteristics of streets and highways; legal structures and codes; automotive mechanics and maintenance; automotive consumer education, and skills in driving.

"We used to think anyone could just pick up driving, but we now realize that instruction and coaching are just as important in driving as they are in athletics, music, or bridge building. When a youngster just picks up driving, he usually acquires bad attitudes from his parents or other drivers. Faulty attitudes are much more often at the bottom of young driver accidents than lack of skill."

The more young drivers given knowledge and healthy driving attitudes at the beginning of their driving careers, the fewer unsafe drivers of all ages there will be in the years ahead.

Mental Health . . . .

JOSEPH E. BARRETT, M.D.

The Children's Unit at Eastern State Hospital, Williamsburg, Virginia

An essential for the successful treatment of most types of mental disorders, whether they be in adults or children, is proper facilities for housing the patients in small congenial groups. It is not too difficult to find five or six individuals who enjoy being together, but it is almost impossible to find 20 to 25 people with like tastes and this congenial atmosphere is a most important feature.

When our June, 1955, survey showed that 73 young people aged 18 years or under had been admitted to Eastern State Hospital during the past 17 months, the establishment of a Children's Unit seemed desirable. A 25-bed ward in one of the newly built structures was selected for this purpose. This ward consisted of a large day room, 17 single rooms, two four-bed sleeping alcoves with ample toilet, lavatory and bathing facilities. Two adjoining rooms intended for hydrotherapy were converted into a classroom and study hall with two smaller rooms serving as library and tutoring areas.

Although such a facility for children is not ideal, it is much better than having these young people scattered about on various wards where adults who are mentally ill are housed. This unit has been used for the boys and its capacity has been stretched, on occasion, to accommodate as many as 33 boys.

Strangely enough, we have always had fewer young girls in our care and it was not until the fall of 1957, when we were caring for 16 young girls ranging from 8 to 16 years, that a girls' unit was established in another ward with the same capacity as the boys'. The nine additional beds not immediately needed for the young ladies are now occupied by young adults with mildly psychotic disturbances. Usually their influence is not too disturbing. It can be seen from this explanation that we can now house 50 adolescent or pre-adolescent persons satisfactorily.

The second essential for the successful operation of such a unit is enough qualified personnel to carry out the activity program prescribed. For this group of 50 we need a minimum of two physicians giving their full time to the interests of these young people. The present size of our medical staff permits us to assign one physician and that one must also perform other duties at the hospital. The registered nurses in charge and the attendants must be carefully selected as to temperament and understanding and, above all, a genuine liking for young people.

Those working with young people realize that their energies must be guided and utilized through purposeful activities. To bring this about we employ (1) education for stimulus and therapy; (2) occupation therapy—the arts, drawing, modelling, rug weaving, sewing, carpentry, ceramics, etc., to keep the mind and the muscles functioning toward pleasurable accomplishment; (3) recreational therapy—dancing, badminton, walks and all the indoor and out-door games young people enjoy; (4) social activities planned to assist them in getting along with others.

The school activities are conducted by one paid teacher with two qualified adult volunteers helping irregularly on four days of the week, also students from the College of William and Mary. The occupation therapy is supervised by the occupational therapist who serves the adult population in the building. Recreation is carried by volunteers—physical education majors from the College of William and Mary plus interested members of the community—birdlovers, boxing amateurs, campers, travelers, etc.

The social activities are often community planned—parties or picnics given by sororities or fraternities, young people from local churches, high school groups and adults composed of club members, church circles, home demonstration and 4-H young people, to name a few sources of cooperation. In addition, we have the fortune to have a Gray Lady, widely travelled and with many interests, who puts on various events which teach the young ladies good taste in dressing and in hair-dressing, how to introduce friends, how to make conversation worthwhile, etc. The volunteer is such a friendly, attractive woman that the children all admire her. We also have a volunteer, a home economics graduate, who

JOSEPH E. BARRETT, M.D., *Superintendent, Eastern State Hospital, Williamsburg, Virginia.*

Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

takes three or four young girls to her home each week, helps them to plan meals, cook the items they decide upon in her well-equipped kitchen, and set a table attractively. The meal is eaten with pleasure to be followed by quick routines for the sanitary washing of dishes. Sometimes they learn the correct way to use a washing machine; special knacks in ironing difficult pieces, how to protect sheets from discoloring, blankets from moths, etc. On another day she may have them as her guests at a restaurant so they feel comfortable and poised under all circumstances.

Many fears and inadequacies are discovered in psychotherapy—in groups or individual. Group discussions are also used for problem solving and to prepare young people to return to their communities or to employment.

The program is given above in some detail because we feel that all these experiences prepare these young people to meet changing circumstances and to make satisfactory adjustments to them. The use of an enlarging group of volunteers to augment the paid personnel provides contacts with many qualified individuals and also prevents fixations or "crushes" on any individuals.

And what are the results? Since January 1, 1953, we have admitted 170 patients, 18 years old or under, to the hospital. 108 of these patients have been discharged: 12 as not having any mental disorder; 26 as recovered; 44 as improved; 3 as unclassified; 11 as unimproved and 12 to other institutions—9 to Lynchburg Training School and Hospital; one to Western State Hospital; one to Woodrow Wilson Rehabilitation Center; and one to a State Hospital in South Carolina. 14 are on furlough, doing well, and will doubtless be discharged from our care when they have been with their families for one year. The remainder are in the hospital until treatment is no longer needed.

Some who are experienced in the handling of children with emotional problems comment unfavorably upon our attempt to carry out such a program with facilities and personnel which they consider inadequate. May we explain, in all humility, that we feel obligated to do all we can for these children who present problems needing solution. When these young people are assigned to us by judges who are in a position to study the previous environments of their charges, we can only accept their decisions in good faith. This is also our attitude toward bewildered parents and welfare agencies who have used all their community resources before asking our assistance in providing diagnosis and residential treatment where this seems to be indicated. We could use more personnel to good advantage, but money is lacking.

DIAGNOSIS OF POISONINGS

Sulfanilamide Derivatives

The sulfanilamide derivatives react with lignin (wood pulp or cheap grade of paper) and concentrated hydrochloric acid to produce an orange color. In the absence of sulfanilamide there is produced a light straw-yellow color.

One drop of urine or a small piece of ground-up sulfanilamide tablet is placed on a piece of newspaper. Onto this, place one drop of concentrated hydrochloric acid. An intense orange color would indicate the presence of a sulfanilamide derivative. As a control, place one drop of hydrochloric acid onto a blank portion of the newspaper and only a straw-yellow color should appear. The colors are strikingly different.

Pre-Paid Medical Care....

Edited by
RICHARD J. ACKART, M.D.

Blue Cross Reserves and Building.

A provision of Blue Cross-Blue Shield's enabling legislation, Section 32-195.7 of the Code of Virginia, in part, reads as follows: *The* [State Corporation] *Commission . . . shall authorize rates . . . that will . . . enable the plan to maintain a reserve for contingencies equal to an amount between one-sixth and three-sixths of the total of rates collected by the plan during the preceding year.* This section reveals the solicitous determination of the Legislature that the Plans shall live on their income, and not on their capital.

These statutory requirements are not merely for the benefit of the Plans themselves; they were designed primarily to protect the benefits contracted for by the subscribers and the payments contracted for by the hospitals and doctors—to protect them permanently, beyond peradventure.

There are enough long term contingencies involved in the operation of Blue Cross-Blue Shield Plans to make evident the need of adequate reserve funds. The Plans operate normally under high loss ratios and with the chance of fluctuations in experience due to epidemics and other catastrophies; further, there is a constant upward trend both in the incidence of claims and in the cost of claims. Blue Cross payments to Member Hospitals are based on the operating costs of those hospitals and therefore are directly affected by any change in the overall price index as well as by such other factors as hospital occupancy ratios.

The extremely liberal underwriting policies of Blue Cross-Blue Shield, which are markedly different from those of conventional insurance, require a reserve of such size and adequacy as to make secure the continuance of such policies. The Plans will not cancel a subscriber's contract because of his age or because of his need to utilize prepaid services. It is, of course, evident that these policies do not provide Blue Cross-Blue Shield with the same underwriting safeguards in risk-selection which are provided by usual insurance underwriting practices. These liberal policies, however, are very much in the public interest; to maintain and safeguard them the Plans must be assured of adequate reserves.

These are some of the long-term contingencies, but of equal importance is the need for adequate reserves to give the Plans a breathing spell between the time that development of adverse experience necessitates a subscriber rate increase and the time that the increase can be made effective and its results actually felt.

The minimum amount of reserve the Richmond Blue Cross Plan should maintain throughout 1958, according to the formula prescribed by law, is $1,400,000. Obviously this amount of money need not be in a checking account. Subscribers' dues payments come in to the Plan's office daily, and when these payments are based on rates commensurate with the Plan's liabilities, they make available the cash the Plan needs to conduct its day-to-day business. Accordingly, just about all of the Plan's reserve for contingencies can be invested to produce additional income for the benefit of subscribers. As a matter of fact, it is proper that a portion, perhaps up to one-half of the reserve be invested in a long-term asset that might not be readily liquidatable providing, however, that it be an asset upon which cash could be advanced to meet an unforeseen contingency, should one develop.

Such was the decision of the Blue Cross Board when it was learned that construction of a new building would be a truly economical way of providing adequate housing for the Plan's office. Its decision in this regard was almost dictated by the fact that after transferring *previously invested reserve funds* from government bonds to land and building an increased yield would in effect be realized, through the saving in annual housing expenses which would result.

A survey of the Richmond Plan's office during 1955 disclosed that for optimum efficiency it should be moved to a location where at least 30% more space would be available. A committee composed of five of the business men who serve the Plan as Directors was appointed to investigate and to determine the most economical way of obtaining the space required. This committee learned that if the Plan's office were to put up with various inefficiencies; such as a multi-floor operation, absence of parking facilities,

and the like, it might be housed (1) by renting space in a typical office building, at an annual expense of $63,000; (2) by renting an old factory building, at an annual expense, after necessary alterations, of $53,400; (3) by buying an existing office building and fixing up the interior for the Association's use, at an annual expense of $96,000; and (4) by renting a new office building constructed to meet the Association's requirements, at an annual expense somewhere between $60,000 and $73,500 (three estimates). The factory building was subsequently determined unsatisfactory because it could provide the minimum amount of required space only if the under-ground basement were used. Thus, committing the Association to a $60,000 annual expense appeared to be the least expensive way of providing for its office—excepting only investing in a building to be constructed and owned by the Association.

This latter arrangement, adopted by the Board, entails transferring $640,000 of the Plan's reserve from bonds to land and building, but the total annual expense of owning and maintaining the Blue Cross building will be only $55,000:

Foregoing 2½% interest from bonds;	
a.) $105,000 transferred to land	$ 2,625
b.) $535,000 transferred to building (av. 50%)	6,688
Depreciation, 2% on $535,000	10,700
Real Estate Taxes	9,024
Maintenance and Insurance	25,900
Total	$54,937

It is the annual expense of housing the Plan's office that must be borne by subscribers, not the cost of land or construction. The latter is being met by use of *previously accumulated reserve funds* that otherwise would remain invested in bonds. But by transferring the investment of those reserve funds to real property, the Plan is reducing from $60,000 or more to $55,000 the total annual housing expense subscribers must bear and, while doing so, is providing for them a *continuing asset.* Any rental arrangement, on the other hand, would constitute a continuing liability and, by comparison, would result in a flagrant waste of subscribers' money.

The New Today's Health . . .

Today's Health—AMA's popular health magazine—is having its face lifted! In the coming months you'll see many changes in the magazine—a new logo (title line), new cover layout, tint block "news" page, broader editorial base, new editorial style and a completely new inside format. Since the AMA's Board of Trustees approved a reorganization plan for the magazine, the following changes in staff have been made: new editor *James M. Liston,* formerly special feature editor of Better Homes & Gardens; new associate editor—*Dennis Orphan,* previously associate editor of McGraw-Hill's Industrial Distribution, and William Vath, formerly managing editor of National Safety Council's Safety News; production coordinator *Robert Hendrickson,* previously with Popular Mechanics Magazine.

In addition, Today's Health now has its own advertising review committee—Leo E. Brown, AMA public relations director, chairman; Dr. Austin Smith, editor of Journal of the AMA; C. Joseph Stetler, director of Law Department, and W. W. Hetherington, executive publisher, Today's Health.

On all counts, 1957 was a good year for Today's Health . . . advertising lineage increased more than 30 per cent over 1956 with dollar volume showing a 40 per cent gain; 1956 advertising was renewed at a rate exceeding 90 per cent; 51 new advertising accounts were established in 1957; circulation continued to grow, topping the 400,000 mark for 9 of 12 issues.

The Medical Society of Virginia . . . .

The A.M.A.'s Committee on Aging

I was privileged to represent The Medical Society of Virginia at a regional meeting of the American Medical Association's Committee on Aging held in Philadelphia December 2, 1957. The report which follows will attempt to inform the reader of the important new vista which is being opened up in the field of gerontology by organized medicine.

A special committee on Geriatrics was created by the House of Delegates of the A. M. A. at its June 1955 session. Realizing that geriatrics properly included the care of the aged only, the June 1956 session of the House of Delegates recommended and approved the change in the name and scope of the committee to The Committee on Aging. This gave it a broader gerontologic meaning and scope. The objectives of this committee were set forth as follows:

1. To explore problems concerned with the medical, biological, psychological, and social aspects of aging.
2. To collect data concerning energy maintenance, fatigue control, and the preservation of specific motivation.
3. To promote research in these areas.
4. To inform the medical profession of the availability of information regarding the aging process.
5. To stimulate medical society interest in the problems of aging.
6. To impress upon the practicing physician the important role he can play by assuming community leadership to enrich the lives of older citizens.

Thus it can be seen that American medicine should assume an important leadership role not only in the purely medical aspects of aging but also in informing itself and the public in the psychological, social, political and economic aspects of our aging population.

The first organizational meeting of the committee was held in Philadelphia, March 19-20, 1956, at the New Lankenau Hospital. The members of the committee, a subcommittee of the Medical Services Committee of the A. M. A., consist of the following:
H. B. Mulholland, M.D., Chairman, Charlottesville.
Edward L. Bortz, M.D., Philadelphia, Pa.
Henry A. Holle, M.D., Austin, Tex.
Wingate M. Johnson, M.D., Winston-Salem, N. C.
Theodore G. Klumpp, M.D., New York, N. Y.
Frederick C. Swartz, M.D., Lansing, Mich.
Cecil Wittson, M.D., Omaha, Nebr.
Subjects discussed at this meeting were, to give a few examples, as follows: Retirement Programs, Physical Maintenance Programs, State Mental Institution Studies in other countries, Homes for Older People, Research Projects Cooperation with other Organizations, Articles for the J.A.M.A. and Regional Meetings. This latter hoped to develop interests in state committees and local medical societies in the field of gerontology.

The second regional meeting was held in Seattle November 27-28, 1956, where further discussion of the vast need in this field of aging was held and some very interesting ways of filling this need were pointed out.

The third regional meeting was held in Dallas, Texas, April 27, 1957. Here further discussion was held with the Texas Medical Association and the Texas Geriatric Society with special emphasis on activities in that region.

Our meeting in Philadelphia was the fourth regional meeting and the participants included representatives from Connecticut, Delaware, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, Rhode Island, Virginia, West Virginia and the District of Columbia, as well as the Federal Government. Dr. Wittson of Omaha, Nebraska, presided in the absence of Dr. Mulholland, chairman.

Dr. Edward L. Bortz commented on the background of the committee. He stated that last year a million people in the United States died of circulatory disease, 236,000 of neoplasms, and there were large numbers of our population afflicted by mental disorders and arthritis. Dr. L. Burney of the United States Public Health Service is taking as a special theme the problem of the aged in his department. As usual the Greeks have a word for it when they said, "The art of living consists of dying young but in delaying the process as long as possible."

Mr. George Cooley, acting Secretary of the A. M. A.'s Council on Medical Service, stated that the Committee on Aging is now entering the stage of maturation as spontaneous enthusiasm has arisen in widely scattered areas of the country. The success of Pediatrics has been due to its over-all ap-

proach to the problems of the growing child, including his environment, his food, his play and his immunization to the most noxious elements of his living. For geriatrics to succeed, a similar pattern is indicated in the total care of older people.

Mr. Cooley suggested a format for the establishment of a committee on aging at the state level. He suggested the following activities which this committee might develop.

1. Review of the activities of other organizations in the area having to do with aging, the aged, and the chronic diseases.
2. Establish liaison with such organizations and offer to advise them on the medical aspects of their programs.
3. Inventory of the medical and related facilities and services available for the chronically ill.
4. Cooperate with other organizations in improving health care services and facilities.
5. Initiation of cooperation with other organizations in developing a central agency for information on physicians and services available to the chronically ill or aged.
6. Study of the various mechanisms which aid in financing the medical and related services required by the aged and chronically ill.
7. Seek to arouse the interest of both physicians and the public in the problems confronted by the aged and chronically ill.
8. Develop a speakers' bureau designed to provide information both to the medical profession and the public.

Dr. Bortz felt that no special geriatrics clinics be established in medical schools but that the medical clinic was the place to teach Geriatrics with special emphasis on growth and development, maturation and senescence.

Dr. Halsey Hunt, Director of the Center for Aging Research of the National Institutes of Health, indicated that his department was interested in everything from cellular physiology to sociological aspects of aging. He condemned the use of what he termed verbal deodorants, such euphemisms as Senior Citizens, Golden Ages, Super 60's, when in effect we were trying to say older people. Others rose to the defense of these names as useful labels for attracting attention.

Dr. S. D. Pomrinse, Chief of the Health of the Aged, United States Public Health Service, stated that at present 11,000,000 of the 14,000,000 persons 65 years of age and older are covered by Old Age and Survivors Insurance under the Social Security program. 8,500,000 are paid by "right" and 2,500,000 by "need" under disability and vendor payment system. The average individual receives $64 per month, the average couple $106, with the maximum couple payment of $183 per month. A longitudinal study of 3,000 recipients is now under study to ascertain their housing, food, clothing, medical and other needs.

A National Conference of Nursing Home Operators is scheduled for February 1958 at which time a standard record system will be proposed, a manual for aids in nursing homes is to be assembled, and staffing practice will be studied. This may be a bit ominous as a government step to regulate nursing homes, which properly should be a local function.

There is now in Washington a Federal Council on Aging made up of all government departments having any interest in aging. It includes representatives from the Department of Health, Welfare and Education, Labor Housing Agencies, Agriculture, Commerce, Interior and Civil Service to mention a few. This council is supposed to take the place of and offset the possibility of another federal bureau.

Dr. Frederick C. Swartz, of the A. M. A. Committee on Aging, spoke on the value of periodic health examinations and suggested that each physician keep a file card to remind his patients of these annually.

Dr. Henry H. Holle of Austin, Texas, and a member of the A. M. A. Commitee on Aging, spoke on selection of medical facilities for the aging. He stated that the average cost for private medical care for the general population was $65 annually while it was $102 for those 65 years of age and over. Whereas 60% of the general population was protected by hospital insurance, only 30% to 35% of those 65 and over were thus protected. Home is still the best place for the care of the aged and he advocated the expansion of home care programs. The patient physician relationship is all the more important in caring for the aging.

In discussing the problem of retirement for the retiree, Dr. Theodore Klumpp of New York and the committee stated that until medicine sets its own house in order about abolishing compulsory retirement it had little right to criticize industry. Hospitalization and health insurance must be extended in some way beyond the retirement age of 65. He advocated preparation for retirement to begin at least five years before the date.

Dr. Howard Rusk of New York in his address on "Dynamic Geriatrics" stated that we now have the

tools to decide the capabilities of people at any age and this should be applied in retirement decisions. One-third of people age 65 have no income at all and two-thirds less than $800 annually. He expressed his opposition to compulsory retirement. He emphasized the importance of community centers for the aged, citing that in one center of over 800 members' visits to the hospital and clinics notably decreased. In a study of 95 patients hospitalized for a period two and a half years only seven were found who actually needed hospital care. A chronic disease facility could have given them adequate care at about three-fifths the cost. New York City has 10,300 general indigent hospital beds costing $25 daily for their maintenance. Twenty-eight hundred of these were occupied by chronically disabled and these have now been segregated into Homestead wards at a cost of only $8 a day. Supervisory care is all that they actually required.

The National Advertising Council in cooperation with the A. M. A.'s Committee on Aging is preparing to inform the country through its various media of television, radio and magazines on the problem of our aging population.

Dr. Cecil Wittson of Omaha, Nebraska, spoke on Mental Health from the Viewpoint of the Psychiatrist and Dr. Wingate Johnson of Winston-Salem from the Viewpoint of the Internist.

This one day meeting was a splendid demonstration of the American Medical Association in action. It gave us who attended a feeling that its leaders were aware of our grass roots problems and were sincerely interested in helping us to solve them locally and in channelling our resources into a national pattern.

John P. Lynch, M.D.

Facts About Snoring

Something can be done about snoring. Snoring is a "widespread complaint that afflicts only those who are not the patients" and only because they are "so unfortunate as to have good hearing," according to Dr. Noah D. Fabricant of Chicago. In fact, there are probably at least 21 million such afflicted people in the country, if it is assumed that the 21 million Americans who snore each disturbs the sleep of one other person.

Writing in January Today's Health, the American Medical Association's popular health magazine, Dr. Fabricant said snoring is generated while breathing in or out during sleep by several structures in the nose and throat. The sounds are due to vibrations in the soft palate and other structures of the throat in response to inflowing and outflowing air. Vibration occurs when the soft tissues of the mouth and throat come close to the lining of the throat.

Some of the ways in which it can be lessened and even cured are: removal of tonsils and adenoids, especially in children who snore; surgical correction of deformities which block the nose; treatment of allergy or infection which blocks the nose, and removal of polyps, benign jelly-like masses hanging in the back of the nose.

Many snorers do so only when lying on their backs. Such a sleeper should be made to change the position of his head to prevent his tongue from falling back. One way of doing this is to make it uncomfortable for him to lie on his back—usually by sleeping with a small pillow under the nape of the neck.

It is possible "to draw two sound conclusions about snoring. The first is that snoring is repressible, even curable, when a definite cause-and-effect relationship is discovered. Something can be done about it. The other conclusion is that the agonized listener, helplessly adrift on a sea of snores, can always wear ear plugs when everything else fails."

Current Currents

A FORUM ON CURRENT PROBLEMS in medical economics will be presented in Washington at the Hotel Statler on Thursday, March 27. The forum is sponsored by six area societies making up the Washington, D. C. Medical Council in cooperation with the William S. Merrell Company.

According to Dr. Haskins Ferrell, Alexandria, the program will cover three basic subjects vitally affecting medical practice; the doctor and his office, the doctor and the law and the doctor and his life planning. Physicians from the District of Columbia, Maryland, Delaware, Virginia, West Virginia and Pennsylvania are expected to comprise an audience of over 1,000.

Physicians attending the forum will have the privilege of calling on any speaker for personal advice and assistance.

JENKINS-KEOGH LEGISLATION has been referred to as a possible solution to the problem of physician maldistribution. This prospect was recently called to the attention of the House Ways and Means Committee by Dr. F. J. L. Blasingame, General Manager of AMA. Dr. Blasingame wrote:

> "Unless something is done to make self-employment as financially attractive as the employee relationship, we believe there is a grave danger that many professional men will by-pass the private practice of their profession. The trend today is definitely toward becoming an employed person. This situation also contributes to a maldistribution of physicians, since it makes the large city more attractive to the young professional by providing more opportunities for him to become employed.
>
> "On the basis of our observations over many years, we are convinced that this is one of the factors contributing to the pronounced migration of professional people into urban areas. So, quite apart from the objectives of obtaining tax equality with our employed counterparts, we urge you to approve legislation of this type because it is in the public interest."

VIRGINIA PHYSICIANS ARE INVITED to attend the annual meeting and scientific session of the Virginia Trudeau Society to be held at the Hotel Roanoke on March 18. An outstanding program has been arranged and will feature such well known guest speakers as Dr. Floyd Feldman, Medical Director of the National Tuberculosis Association, Dr. M. L. White, Jr., Huntington, West Virginia, Dr. Michael Furcolow, Kansas City, and Dr. Oscar Auerbach, East Orange, New Jersey.

Among the papers to be presented will be "Some Aspects of Spontaneous Pneumothorax", "Histoplasmosis", and "Bronchogenic Carcinoma as it Relates to Smokers".

1958 ANNUAL MEETING—OCTOBER 12-15

HOTEL JEFFERSON, RICHMOND

THE HEAD OF THE SOCIAL SECURITY ADMINISTRATION recently called attention to the fact that social security, contrary to popular concept, is a tax rather than an insurance program in the usual sense. This was pointed out during a recent meeting sponsored by the Social Legislation Information Service.

A number of other interesting disclosures were made during the meeting: (1) approximately 11 million persons are now receiving monthly social security benefits, and 65 per cent of all over 65 are now drawing old age and survivors benefits or will be able to draw them when their earnings decrease. By 1980, the proportion of the aged population eligible for benefits will be 85 per cent, and by the year 2,000, 94 per cent. (2) The disability trust fund, from which come payments to those disabled persons of 50 years and over, had a year-end balance of $640 million. (3) Social Security Administration underestimated both the number of women who would retire at age 62 and self-employed farm operators who would come under the program as a result of the 1956 amendments. This caused expenditures to move ahead of receipts earlier than anticipated.

THE AMERICAN MEDICAL EDUCATION FOUNDATION has just ended another record year, with contributions totaling $984,885. This figure appears somewhat smaller than the 1956 total because the AMA grant of $100,000 was not supplemented with an additional $125,000 as in the previous years. Actually, there was a 13 per cent increase in voluntary contributions and an increase of 4,263 in the number of contributors.

Grants to the country's medical schools will soon be made. Last year, Virginia's two medical schools received grants from the Foundation and the National Fund for Medical Education totaling $97,510.50. All physicians are urged to contribute as generously as possible.

THE VETERANS ADMINISTRATION plans, within the next few months, to request bids on 9 hospital construction projects estimated to cost between $16.9 million and $23 million. Hospitals on the list for improvement for additions are those at Syracuse; Newington, Connecticut; Bronx; Ann Arbor; Bedford, Massachusetts; Chillicothe, Ohio, and Roanoke.

PUBLIC HEALTH SERVICE is stressing the following three points in its campaign to obtain more commissioned corps physicians: (1) doctors with military obligations can meet them by serving two years with PHS, (2) PHS Officers receive the same pay, allowances and benefits as military service officers, and (3) most PHS assignments are in clinical medicine, with a limited number of openings in research, preventive medicine and public health. The PHS medical personnel problem has been caused in part by the ending of the special doctor draft and an easing in military requirements for physicians.

THE POPULATION OF THE UNITED STATES has practically doubled since 1900, but the number of persons 65 years and older has more than quadrupled. It is predicted that, by 1975, one in ten of our total population will be in the upper age bracket. It is also predicted that there will be 138 older women for every 100 older men.

Miscellaneous . . . .

Principles of Medical Ethics.

This is the second of the series of "Principles of Medical Ethics", the first appearing in the February issue. Each section will be reviewed, accompanied by a detailed explanation from the Judicial Council of the American Medical Association.

SECTION 1

The principal objective of the medical profession is to render service to humanity with full respect for the dignity of man. Physicians should merit the confidence of patients entrusted to their care, rendering to each a full measure of service and devotion.

TRADITIONAL CONCEPTS INCLUDED WITHIN SECTION 1

The Judicial Council is of the opinion that Section 1 of the Principles of Medical Ethics, 1957, embraces the spirit and intent of several sections of the 1955 edition of the Principles including: Chapter VII, Section 4 (Free Choice of Physician); Chapter I, Section 1 (Character of the Physician); Chapter IV, Section 1 (Dependence of Physicians on Each Other); Chapter IV, Section 2 (Compensation for Expenses); Chapter VI, Section 1 (Misunderstandings to be Avoided); Chapter VI, Section 2 (Social Calls on Patient of Another Physician); Chapter VI, Section 3 (Services to Patients of Another Physician); and Chapter VI, Section 4 (Criticism to be Avoided). These sections are reproduced as guides in the interpretation of Section 1.

Chapter VII, Section 4 (Free Choice of Physicians) 1955 edition of the Principles of Medical Ethics:

> Free choice of physician is defined as that degree of freedom in choosing a physician which can be exercised under usual conditions of employment between patients and physicians. The interjection of a third party who has a valid interest, or who intervenes between the physician and the patient does not per se cause a contract to be unethical. A third party has a valid interest when, by law or volition, the third party assumes legal responsibility and provides for the cost of medical care and indemnity for occupational disability.

Chapter I, Section 1 (Character of the Physician) 1955 edition of the Principles of Medical Ethics:

> The prime object of the medical profession is to render service to humanity; reward or financial gain is a subordinate consideration. Whoever chooses this profession assumes the obligation to conduct himself in accord with its ideals. A physician should be "an upright man, instructed in the art of healing." He must keep himself pure in character and be diligent and conscientious in caring for the sick. As was said by Hippocrates, "He should also be modest, sober, patient, prompt to do his whole duty without anxiety; pious without going so far as superstition, conducting himself with propriety in his profession and in all the actions of his life".

Chapter IV, Section 1 (Dependence of Physicians on each Other) 1955 edition of the Principles of Medical Ethics:

> As a general rule, a physician should not attempt to treat members of his family or himself. Consequently, a physician should cheerfully and without recompense give his professional services to physicians or their dependents if they are in his vicinity.

Chapter IV, Section 2 (Compensation for Expenses) 1955 edition of the Principles of Medical Ethics:

> When a physician from a distance is called to advise another physician about his own illness or about that of one of his family dependents, and the physician to whom the service is rendered is in easy financial circumstances, a compensation that will at least meet the traveling expenses of the visiting physician should be proffered him. When such a service requires an absence from the accustomed field of professional work of the visitor that might reasonably be expected to entail a pecuniary loss, such loss may, in part at least, be provided for in the compensation offered.

Chapter VI, Section 1 (Misunderstandings to be Avoided) 1955 edition of the Principles of Medical Ethics:

> A physician, in his relationship with a patient who is under the care of another physician, should not give hints relative to the nature and treatment of the patient's disorder; nor should a physician do anything to diminish the trust reposed by the patient in his own physician. In embarrassing situations, or whenever there seems to be a possi-

bility of misunderstanding with a colleague, a physician should seek a personal interview with his fellow.

Chapter VI, Section 2 (Social Calls on Patient of Another Physician) 1955 edition of the Principles of Medical Ethics:

When a physician makes social calls on another physician's patient he should avoid conversation about the patient's illness.

Chapter VI, Section 3 (Services to Patient of Another Physician) 1955 edition of the Principles of Medical Ethics:

A physician should not take charge of, or prescribe for another physician's patient during any given illness (except in an emergency) until the other physician has relinquished the case or has been formally dismissed.

Chapter VI, Section 4 (Criticism to be Avoided) 1955 edition of the Principles of Medical Ethics:

When a physician does succeed another physician in charge of a case he should not disparage, by comment or insinuation, the one who preceded him. Such comment or insinuation tends to lower the confidence of the patient in the medical profession and so reacts against the patient, the profession and the critic.

OPINIONS AND REPORTS OF THE JUDICIAL COUNCIL

The following are excerpts from Reports and Opinions of the Judicial Council which are applicable in interpreting Section 1.

Rental of Radium

The advisability of the use of such a powerful agency as radium by those not trained in its use and ethics involved in prescribing and directing its use by a person who has not examined or seen the person on whom it is to be used has come before the Council. As a result of a rather extensive correspondence both with those favoring its use as decribed and those opposed, the Judicial Council is of the opinion that the prescribing and directing of its use in the case of a patient whom the prescriber has not examined or seen is an unethical medical procedure. (*1938 Report*)

Health and Medical Insurance Benefits

(a) If a physician or his dependents have insurance providing benefits for medical or surgical care, a physician who renders such service may accept the insurance benefits without violating the provisions of the Principles of Medical Ethics. (*1951 Report*)

(b) The 1955 edition of the Principles state (Chapter IV, Section 1) that a physician should cheerfully and without recompense give his professional services to physicians or their dependents. The Principles recognized, however, that such services may take the attending physician away from his accustomed field of practice and cause him pecuniary loss. They provided, therefore, that if the physician who received medical care is in easy financial circumstances he may offer compensation to the physician who attended him for traveling expenses, which compensation may include an amount to provide in part for loss of time away from accustomed practice. The Judicial Council in its report to the House of Delegates at its Los Angeles, 1951, session stated, "If a physician or his dependents have insurance providing for medical or surgical care, then, in the opinion of the Council, a physician who renders such service may accept the insurance benefits without violating the provisions of Chapter IV, Sections 1 and 2 of the Principles." The Council reaffirms the traditional practice of physicians caring for the medical needs of colleagues and their dependents without charge, providing, however, that insurance benefits may ethically be tendered the treating physician to recompense him for loss of time away from his accustomed practice. (*JAMA, October 15, 1955*)

Free Choice of Physician

(a) The Judicial Council calls attention to the third point of the Ten Principles adopted in Cleveland in 1934 which defines "free choice of physician". This the Council interprets to mean not only the patient's right to choose any physician desired but also, conversely, the physician's right to accept or reject any patient requesting his services under the plan. It also expressly requires that any qualified, licensed physician residing in the area in which the plan operates be allowed to participate. Thus we see that to be a participating doctor in a voluntary plan it is not necessary for one to be a member of the American Medical Association. It is, however, necessary for him to accept and obey the terms of the contract offered by the plan, and on violation of the terms he may be dropped from the rolls, if the violation seems sufficiently grave for such action. It is needless for us to remind members that any violation of this provision would indeed deprive the public of the choice of a great many physicians. As the voluntary plans are intended

to cover and supply medical care of a high quality for the whole country, with no feature of a compulsory system, it is necessary that the principle be strictly observed. However, it is tacitly understood that any contract between an approved voluntary medical plan and a doctor includes an understanding that the ethics of the American Medical Association will not be violated. These basic points also require that the medical profession determine the adequacy and character of the hospitals. All hospitals approved by the local physicians and willing to accept the terms of the plan should be allowed to participate. In order that a high standard of medical service be maintained, hospitals may limit somewhat the number of physicians who deliver medical service in their institutions and even assign a physician to certain definite fields in accordance with his training and experience. The widest possible use of hospitals approved by the local profession should be encouraged in order not to limit the number of doctors made available for the plan. Under no circumstances shall doctors working under this plan be forced to send patients to a particular hospital unless it is the only one approved in that area. (*1947 Report*)

(b) The phrase "free choice" of physician is more and more frequently used and there is a general understanding of what the phrase means. Actually no person can have an absolutely free choice for many reasons, and if his freedom of choice is not absolute then it is not free but limited. Chapter II, Section 3 of the Principles [1955 edition] states: "A physician is free to choose whom he will serve." Therefore the physician whom the patient chooses may decline to serve when he is chosen, or the chosen physician may be unavailable for many reasons. (*1937 Report*)

Patients for Study at Clinical Center.

The attention of physicians who may be interested in referring patients for study at the Clinical Center, National Institutes of Health, Bethesda, Maryland, is called to the following announcement:

Because of intensified research effort in these areas, diagnoses of particular interest to the Clinical Center at the present time include: *Reiter's syndrome, idiopathic thrombocytopenic purpura, drug purpura, hemophilia, and children with malignant neoplasms, particularly leukemia.*

Patients are considered for admission to the Clinical Center for study and treatment only when referred by their own physicians as having a diagnosis required on one or more clinical research projects being conducted by the National Institutes of Health. Referrals should be by letter which incorporates an adequate summary; however, preliminary inquiries by telephone may be made. Such communications should be addressed to the Director of the Clinical Center for registration and circulation among appropriate clinical groups. There is no charge to the patient for medical, surgical, or other hospital services rendered as a necessary part of his participation in the research program. Upon discharge of the patient back to his care, the referring physician receives a full report on findings together with recommendations when indicated.

As stated above, there is particular interest at the present time in referrals of patients deemed suitable for the following studies:

1. *Reiter's Syndrome:*

   The National Institute of Arthritis and Metabolic Diseases is expanding its study of Reiter's syndrome. This syndrome is an acute or chronic recurring polyarthritis following a non-specific urethritis, and is frequently associated with conjunctivitis. Study patients with this disease are especially needed during the first two weeks from onset. Microbiological, immunological, clinical and therapeutic studies will require an average hospitalization of 4 weeks.

2. *Idiopathic Thrombocytopenic Purpura: Drug Purpura:*

   A hematology group in the National Institute of Arthritis and Metabolic Diseases is studying the diseases idiopathic thrombocytopenic purpura (ITP) and drug purpura due to quinidine or quinine sensitivity. It is hoped that the possible allergic nature of ITP may be more clearly demonstrated by comparing the clinical and experimental laboratory results in the two diseases. The ITP cases of special interest include any early case prior to steroid therapy or splenectomy, or any case showing no response to these forms of therapy. Patients with a history of quinidine or quinine drug purpura, or suspected drug purpura, would be as suitable as those having acute manifestation of this disease.

3. *Hemophilia:*

   The hematology group is also interested in patients with abnormalities in blood coagula-

tion, particularly those with obscure or any type of known hemophilia. Because of the research requirements in evaluating newer forms of therapy in these diseases, adult patients are preferable to infants or young children.

4. *Leukemia and Other Forms of Cancer in Children:*

The National Cancer Institute is enlarging its studies of cancer in children, particularly leukemia and allied disorders. The purposes of the leukemia study are: Improvement in chemotherapy; the trial of new and more active antileukemic agents; improved methods in studying and managing infections, bleeding, and other complications; and basic studies of the nature of the leukemic process.

Infants and children under 15 with other forms of cancer are studied from several viewpoints, including etiological factors, new or improved therapies, and metabolic or endocrine aspects.

More than 100 separate clinical studies are being conducted at the 500-bed Bethesda research hospital by the seven research institutes forming the National Institutes of Health, research branch of the Public Health Service, U. S. Department of Health, Education, and Welfare. These studies are listed and described briefly in a pamphlet which interested physicians may obtain by writing to the Clinical Center.

Nutrition in Arthritic Process

There is no special diet for the treatment of arthritis, according to the American Medical Association's Council on Foods and Nutrition. In a special report prepared for the council, Dr. William D. Robinson, Ann Arbor, Mich., said joint diseases are "essentially diseases of the supporting structure of the body, the connective tissue." It is "extremely unlikely that the functioning of this tissue can be directly affected by dietary manipulation." However, patients with diseases of the joints do need to pay attention to their diet, because of its effect on their general state of health.

Many diets and specific vitamins and minerals have been suggested for the treatment of arthritis, but research has failed to show any relationship between nutrition and the cause of most rheumatic diseases.

Gout is the only fairly common form of joint disease in which diet and the use of food by the body have been shown to affect the disease. Food allergy, high fat diets, and periods of fasting all precipitate gout attacks; therefore, patients need to watch their diets carefully.

Occasionally special diets are needed by persons with arthritis, even though they will have no effect on the disease itself. For instance, overweight patients often need to lose weight to reduce the load on the affected weight-bearing joints. Diets high in calories, proteins, vitamins, and minerals are sometimes necessary for patients who have lost weight and muscle tissue, a situation frequently encountered in rheumatoid arthritis.

Many forms of rheumatic disease are self-limiting, with a tendency to subside spontaneously after a varying length of time. Confusion of such conditions as bursitis or psychogenic rheumatism with various types of arthritis undoubtedly has been responsible for the claims of value for various diets and vitamins as treatments for arthritis.

Dietary treatment for the arthritic patient may be an important aspect of the total program of effective treatment, but such treatment "must be adapted to the general condition of the individual patient as well as to the type of rheumatic disease present."

Dr. Robinson is in the department of internal medicine and the Rackham Arthritis Research Unit of the University of Michigan. His report appeared in the January 18 Journal of the A.M.A.

Woman's Auxiliary....

*President*_____ Mrs. John R. St. George, Portsmouth
*President-Elect*_____Mrs. Charles A. Easley, Danville
*Vice-Presidents*_____Mrs. Girard Thompson, Chatham
Mrs. George Brooks, Richmond
Mrs. Robert Detwiler, Arlington
*Recording Secretary*_____Mrs. James Grinels, Richmond
*Corresponding Secretary*__Mrs. Howard Kruger, Norfolk
*Treasurer*____Mrs. Wyndham B. Blanton, Jr., Richmond
*Publication Chairman*_____Mrs. Paul Pearson, Warsaw

Hopewell.

This Auxiliary was organized on October 16th and the following officers were elected: President, Mrs. Clyde H. Dougherty; vice-president and president-elect, Mrs. John G. Easterling; and secretary-treasurer, Mrs. Norman F. Wyatt. Mrs. Lee S. Liggan and Mrs. J. R. St. George represented the State Auxiliary at the organizational meeting.

The January meeting was a supper party for the Hopewell Medical Society and was held in the home of Dr. and Mrs. W. H. Stout.

Danville-Pittsylvania.

Taking note of the current shortage of nurses, this Auxiliary is planning a nurse-recruitment program in the city and county high schools before April. Representatives will give talks and show movies in the various schools in an effort to interest students in the nursing schools throughout the State. Mrs. Girard V. Thompson, Chatham, will direct these activities. The Auxiliary will continue to maintain its Nurses Scholarship Fund which is being used by student nurses at Memorial Hospital School of Nursing. A Food Sale was held on January 31st for the Fund.

At the meeting held on January 16th, with the president, Mrs. Henry R. Bourne, presiding, Lt. Bert Sheely of the Danville Police Department was guest speaker. He is superintendent of traffic control and stated that his work deals with three phases —education, engineering and enforcement. In giving statistics of accidents in Danville and their causes, he stated that the greatest percentage is due to human failure rather than mechanical failure, most of them being caused by not yielding the right of way. A question and answer period followed.

Ruth R. Sager (Mrs. William L.)
Chairman, Publicity Committee

Northern Neck.

This Auxiliary met on January 28th at Lowery's Grill, Warsaw. After lunch, they reconvened in the home of Mrs. Paul Pearson. Mrs. E. T. Ames, president, presided, and reports of chairmen were given and topics of business and interest were discussed.

The meeting will be held in May at which time, Mrs. John R. St. George and Mrs. Charles Easley will be guests.

Virginia Drewry McG. Pearson
(Mrs. Paul C.)
Publicity Chairman

Tazewell.

A luncheon meeting of the Auxiliary was held in January at the home of Mrs. Rufus Brittain, Tazewell.

It was decided to award a fifty dollar scholarship this spring to the high school student graduating in Tazewell County with the highest grades among those who are going to enter the profession of nursing. Plans were made to celebrate Doctor's Day by entertaining the doctors at a dinner meeting in September. The Auxiliary donated five dollars to the March of Dimes.

Ethel P. Ballard (Mrs. H. H.)
Chairman, Press and Publicity

Northampton Accomac.

The first meeting of the year was held on January 14th at the home of Mrs. W. L. Cosby, Painter. The president, Mrs. R. K. Brown, presided. Mrs. H. L. Denoon, Mrs. S. K. Ames, and Mrs. S. S. Kellam were re-appointed as a committee for the needs of the Grace Wilkins Holland Room at the Hospital, and Drs. W. T. Green, Jr., and J. Fred Edmonds as Advisory Council.

Plans for Doctor's Day were made. This will be held at the home of Dr. and Mrs. John R. Hamilton on April 12th. The committee is Mrs. Milton Kellam, Mrs. W. C. Henderson and Mrs. R. K. Brown.

The Spring meeting will be held at the home of Mrs. C. E. Critcher, New Church.

Catherine R. Trower
Chairman, Press and Publicity

Book Announcements . . . .

Books received for review are promptly acknowledged in this column. In most cases, reviews will be published shortly after the acknowledgement of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

Hospital Accreditation References. American Hospital Association, Chicago, Illinois. 1957-136 pages. Price $3.25.

Healthful School Living. A Report of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association with the cooperation of contributors and consultants. Editor, Charles C. Wilson, M.D., Professor of Education and Public Health, Yale University. ix-323 pages. Illustrated. Cloth. Price $5.00.

That Degenerate Spirochete. By OSCAR DANIEL MEYER, M.D. Vantage Press, Inc., New York. 1957. 320 pages. Cloth. Price $5.00.

Cortisone Therapy. Mainly Applied to the Rheumatic Diseases. By J. H. GLYN, M.A. (Cantab.), M.D., M.R.C.P., D.Phys. Med., Consultant in Physical Medicine to the Prince of Wales and Tottenham Group of Hospitals. Philosophical Library, Inc., New York. 1957. x-162 pages. Cloth. Price $10.00.

The Neuroses and Their Treatment. Edited by EDWARD PODOLSKY, M.D., F.A.P.A., F.A.P.M., Department of Psychiatry, Kings County Hospital, Brooklyn, N. Y. Philosophical Library, New York. 1957. xiv-555 pages. Cloth. Price $10.00.

Physical Methods in Physiology. By W. T. CATTON, M.Sc., Physiology Department, King's College, Newcastle-upon-Tyne. Philosophical Library, New York. 1957. xi-375 pages. Cloth. Price $10.00.

Practical Use of the Office Laboratory and X-Ray. Including the Electrocardiograph. By PAUL WILLIAMSON, M.D. The C. V. Mosby Company, St. Louis. 1957. 323 pages. Illustrated. Cloth. Price $10.75.

This is a primer of clinical pathology, electrocardiography and roentgen diagnosis written by a general practitioner who, refreshingly enough, recognizes the limitations of most of our diagnostic tools.

This author discusses the fundamental physiology and pathologic variations of tests available to the general practitioner in an office equipped with nothing more elaborate than an inexpensive photocolorimeter, ECG and basic radiographic equipment. The variety of determinations that can be done is surprising; however, the frequency with which this book is used will probably vary directly with distance from a professional clinical laboratory.

The brevity of the book and wide variety of material covered frequently necessitate oversimplification, which might be annoying to some.

Techniques for examinations of blood, urine and body fluids are adequately described and illustrated and most might be readily carried out by an office assistant lacking formal laboratory training. Office mycology, bacteriology and parasitology are briefly considered and the more common ECG abnormalities are discussed with their fundamental physiological alterations.

One third of this book is devoted to office roentgen procedures utilizing modest equipment and might be of considerable use in clarifying numerous vagaries of x-ray diagnosis if supplemented by a standard text with reproductions since the somewhat idealized line drawings of the roentgenogram included in the book are generally less than adequate.

W. B. LUNDEEN, M.D.

Foot Troubles. By T. T. STAMM, F.R.C.S. Philosophical Library, Inc., New York. 1957. viii-122 pages. Illustrated. Cloth. Price $4.75.

This book is supposed to take the patient into the doctor's confidence so that both work together to get the patient better, to explain things simply and intelligibly, to offer foot sufferers whatever hope modern medicine can honestly offer—in other words, to tell the truth about foot troubles as it has never been told to the laity in print before.

This book falls far short of this ideal. Much of its subject matter and its presentation is too advanced for the average patient. Chapters such as "Diagnosis of Foot Pains" should not be within its scope as a little knowledge is always dangerous. With this type of work one must either simplify so that the layman may comprehend without getting too technical, in which case this book would be of little interest to the student or doctor, or one must write especially for the professional when the work will be too technical for the layman. This book has lost some of its usefulness because it falls between these two extremes.

In fairness to the author and publishers, one must hasten to add that it is still a useful survey in spite of the above criticisms. On the credit side are the excellent illustrations and the chapters on "Hallux Valgus and Hallux Rigidus", "Flat Foot", and "Foot Strain", "Minor Foot Troubles", and "Diagnosis of Foot Pains". Dr. Stamm describes, with illustrations, the mechanism of the healthy foot and its muscles, then reviews—with their treatments and preventive measures—various types of foot problems. He concludes with advice on the care of children's feet, the choice of footgear and foot exercises.

ALBERT PINCUS.

President's Message . . . .

SINCE taking office in October, I have become aware that Organized Medicine, as we physicians call ourselves, is organized against itself in some ways. There are certain weaknesses in our system that we do little about. These may be our Achilles heel in the fight against socialism.

One of the worst problems facing us is greediness on the part of a few individuals. They may be excellent physicians, pillars of society in their communities, and dearly loved by their patients, but as soon as they know that a certain case is covered by an insurance policy they begin to develop ways and means of charging more.

This has been evident in the past under Blue Shield coverage and under private insurance coverage. Now it is being seen under Medicare coverage. Many devices are used to hike the charges up just a little more than normal all along the line. I have been told privately that this might be enough to force many, if not all of the "castastrophe plans" out of the health insurance field.

Both Blue Shield and Medicare have review boards for questionable cases and the physicians on these boards are having to devote more and more of their time to this work. Private insurance has no such review board, and it has had no recourse. It has paid the charges, realizing often that they were exorbitant. The voluntary health insurance industry, including the insurance companies issuing private health and accident coverage as well as the Blue Shield group plans, touches a very large segment of the population. Were either division of it to decide to stop issuing policies, there would be created a perfect spot for socialized "insurance" medicine by the government. By thinking a moment about the business end of insurance you must realize that the claims paid determine the premium charged, and the premium governs the number of policies sold. Unless the premiums can be low enough to attract enough purchasers, the insurance company can't make a go of it. It often takes a great many premiums to pay off one single claim.

By the same token, Medicare costs eventually come out of tax funds. Overcharging there takes it out of your own, (and my own), pocket. It doesn't take much imagination to realize that a few bad apples in our barrel may eventually ruin us all.

We seem unfortunate in our inability to police ourselves adequately in these problems. We demand freedom and scream loudly at any attempt to regiment us, and yet a very few who will not hew to the line bring trouble to all of us. We have Ethics Committees and Mediation or Grievance Committees, but they seldom are called on to penalize members. When they do, their penalties are relatively mild because of legal restrictions. This situation makes us, as a profession, more vulnerable to outsiders who accuse us publicly of padding our fees and then claim that the profession is not willing to try to correct it.

We need a Committee in each constituent medical society which will make itself available to the insurance carriers for determining the propriety of questionable medical charges. This should probably come under the jurisdiction of the Grievance or Mediation Committee as they now stand. These Committees, once embarked on this project, should do all in their power to reach a just decision. If it is determined that any given charges are unfair, however, that Committee should recommend adequate penalties and the Society should carry them out. Only by correcting our own faults will we keep them from being turned against us. The insurance industry has asked our cooperation and I have assured them we will try to give it.

Please keep adequate records for your own protection. Please check your charges carefully before billing, whether an individual or an insurance carrier. In this way, if your charges are ever questioned you can substantiate them without question.

H C Bates, Jr.

Editorial....

Paul B. Barringer: Virginia's Forgotten Medical Educator

AMONG EDUCATORS in Virginia few have been of comparable stature to Dr. Paul B. Barringer—student, professor and later Chairman of the Faculty at the University of Virginia and for six years President of the Virginia Polytechnic Institute. Despite his contributions in many fields of education he today is remembered chiefly by a pavilion named for him at the University of Virginia Hospital.

It is interesting to speculate on the reason for this lack of knowledge concerning Dr. Barringer. The period of his greatest productivity fell during that drab era between the end of Reconstruction and the early nineteen hundreds. His days, like those of most Southern leaders, were occupied in making bricks without straw and the world at large is little concerned by the handicaps that have been overcome, especially if these handicaps existed south of the Mason and Dixon Line. Dr. Barringer's early retirement, at the age of fifty-six, removed him from the public scene twenty-eight years before his death in 1941. Long periods of retirement are not conducive to spreading one's fame. Be that as it may, his accomplishments were many and his contributions to Southern medicine should not be forgotten.

Born in Concord, North Carolina, in 1857, Dr. Barringer's Confederate connections were unique. He was the son of General Rufus Barringer, who was twice wounded and the survivor of seventy-six battles, and the nephew of Generals D. H. Hill and "Stonewall" Jackson. The early death of his mother caused him to spend two years in General Jackson's Lexington home. He had the faculty of being present when history was in the making. An early example of this occurred when Jefferson Davis and his cabinet, fleeing Richmond, spent the night at the Barringer home. Young Barringer, then eight, challenged Davis to a game of chess and won.

He learned first-hand the laws of nature from John Bachmann while hiding out with the great naturalist who was being sought by a raiding party under Stoneman during the closing days of the War. Alexander Graham Bell explained the telephone to him and medical visits to Europe brought him in contact with Billroth, Politzer and others. He witnessed the explosion and subsequent fire in the Ring Theatre in Vienna which cost 850 lives. A knowledge of the deaf and dumb language permitted him to interpret in German during a small-pox epidemic in Bosnia.

Barringer entered the University of Virginia in 1875. As an undergraduate he took a lively interest in cock fighting and was active in lifting this neglected sport from an intramural to an intercollegiate basis which crossed states lines into North Carolina, Kentucky and Georgia. He received his medical diploma in 1877, after one year of largely didactic instruction. An additional six months was spent at the University of the City of New York where he received clinical training in emergency room and hospital ward routine and a second medical degree.

Study abroad was followed by a brief period of practice in Charlotte and teaching at Davidson College where he instituted a basic science school for freshman medical students. In 1889 he returned to the University of Virginia where he succeeded Dr. James Lawrence Cabell as Professor of Physiology and Surgery. He was author of a standard text on Physiology. Under his leadership the medical course was increased to two years, in 1895 it became three years and in 1898 the present four year course was adopted. His medical interests were varied. Dr. Barringer was a vigorous writer and excellent teacher. He was a charter member of the State Board of Health.

He was the first to point out the role played by the primitive sanitation of the railway passenger coach in spreading typhoid bacilli along the right of way. While Dr. Barringer's professorship included that of surgery, it is difficult to determine how active he was in this specialty. Local tradition has it that he enucleated the eye of Colonel John S. Mosby after the former guerrilla leader was injured in a runaway carriage accident.

It is most appropriate that a wing of the University of Virginia Hospital should be named for him. Just as Jefferson was Father of the University so was Barringer Father of the Hospital. Much time and effort was devoted by him in financing and building the initial unit of the present University Hospital. Prior to this the clinical facilities consisted of a dispensary for treating out-patients and a few beds for the care of ill students.

Considerable local opposition had to be overcome, for some University residents protested that an institution of this type would bring contagious diseases into the community. A gift of $600.00 by Lady Astor in 1899 provided for the foundation only and two years elapsed before Barringer could complete the 50 bed building which was designed by Paul J. Petz, architect for the Congressional Library.

Dr. Barringer meanwhile, in 1896, was made Chairman of the Faculty, which meant his duties were those of the President although this title was not used until the arrival of another North Carolinian, Dr. Edwin A. Alderman in 1904. While serving in this capacity it fell to his lot to repair the damage resulting from the Rotunda fire of 1895. It was his decision not to rebuild the annex, an excrescence added to the Rotunda twenty-five years after Thomas Jefferson's death. His refusal to perpetuate this mistake places the University forever in his debt.

Dr. Barringer's interest ranged beyond the limits of medicine and the University and improving the education of the Negro was to him a matter of vital concern. He worked with Booker T. Washington to bring this about. He also endeavored to tie the Virginia public school system in with the University, which has a certain modern ring. His interest extended to cattle breeding and upon this subject he exchanged ideas with Theodore Roosevelt. A youthful fondness for snakes carried over into manhood and a monograph on this subject in 1902 is still of value.

As his interest in public health increased and his medical teaching responsibilities became more demanding, he resigned from the faculty chairmanship in 1903. This gave him time to rewrite his text on Physiology. Four years later he became President of the Virginia Polytechnic Institute. This permitted him to make changes in the curriculum which served to correlate this college more closely with the State and National Departments of Agriculture.

In 1913 he returned to Albemarle near the University and retired to the role of gentleman farmer and consultant in Medical Education. He returned to active duty at the request of the United States Public Health Service during World War I.

His philosophy of Life extended to a philosophy of Death and in his declining years he wrote—

"The old man, the fires of youth burned out, the appetites of life largely satiated, slowly and complacently withdraws himself within the bounds of a special kingdom called old age and awaits, with anticipation rather than fear the final flickers of the spark in the embers of life. . .

"It is an end, naturally, legitimate and right. . . . Death will come . . . as a friend."

And so it did for Dr. Barringer on January 9, 1941. He served the University and the State of his adoption surpassingly well and he deserves to be listed among its foremost benefactors.

H.J.W.

News....

New Members.

The following new members have been admitted into The Medical Society of Virginia since the list published in the February issue of the Monthly:

Danute G. Bieliauskas, M.D., Quinton
Roland Essig Bieren, M.D., Falls Church
Junius Ellett Crowgey, M.D., South Boston
Edward Colson Day, M.D., Falls Church
William Thomas Driebe, M.D., Arlington
Frederick Moulton Gross, M.D., McLean
Josias Henry Hawkins, M.D., Richmond
Eugene Wilder Heatwole, M.D., Newport News
James Karr Hinton, M.D., South Boston
Charles E. Law, M.D., Alexandria
Jack Amory Lawson, M.D., Newport News
James Beaton Littlefield, M.D., Charlottesville
Volker W. A. Luethy, M.D., Newport News
Anthony Theodore Moll, M.D., Hampton
Richard P. Perrine, M.D., Clintwood
George Wheeler Roark, Jr., M.D., Fairfax
William DeWitt Rusher, M.D., Crewe
Thomas W. Sale, Jr., M.D., Hampton
James Howard Smith, M.D., Petersburg
William Crenshaw Smith, M.D., Waynesboro
William Kyle Smith, Jr., M.D., Charlottesville
Bernard Harold Zeavin, M.D., Alexandria

Annual Meeting.

The annual meeting of The Medical Society of Virginia will be held at Richmond's Hotel Jefferson, October 12-15.

The Local Committee on Arrangements regrets that it is not possible to house everyone at the headquarters hotel. Although the management of the Jefferson has been exceedingly liberal, there are just not enough rooms available to take care of the demand.

There are, however, a number of excellent hotels in Richmond and an early request should bring the reservation of your choice.

For your information and convenience, a guide to some of Richmond's principal hotels is listed below:

John Marshall—5th & Franklin Streets—MI 4-4661
Richmond—9th & Grace Streets—MI 3-2731
King Carter—8th & Broad Streets—MI 3-1831
William Byrd—2501 West Broad Street—EL 8-1571
Raleigh—9th & Bank Streets—MI 8-8384

Progress of Headquarter's Building.

With a few days of good clear weather, work has really progressed on the new building for headquarters. Most of the outside brick work is about completed and once the roof is on, the weather should not hold up the completion. It is still hoped that the building will be ready for occupancy near the end of June.

Dr. S. S. Shouse,

Appomattox, is now serving as advisor to the Peruvian Government under the World Health Organization authorized by the United States. His headquarters are in Lima. Until his recent appointment, Dr. Shouse had been serving as regional health director for the State of Kentucky and made his temporary home in Louisville. He is a legal resident of Appomattox County and established the health departments in Appomattox, Campbell and Amherst Counties. Mrs. Shouse and their five children, who reside at Hillandale Farm, Appomattox, expect to join Dr. Shouse in the near future.

Current Problems in Medical Economics.

Six area societies, making up the District Medical Council, will sponsor an all-day forum on current problems in medical economics in cooperation with the Wm. S. Merrell Company at the Hotel Statler, Washington, D. C., March 27th. Dr. H. H. Ferrell, Alexandria, is forum chairman and vice president of the Council.

The program will cover three basic subjects: The Doctor and His Office; The Doctor and the Law; and The Doctor and His Life Planning. Distinguished specialists are invited to speak.

Physicians of the District of Columbia, Maryland, Delaware, Virginia and West Virginia are invited to attend.

Dr. Richard H. Fisher.

In the report of the Virginia Orthopaedic Society in the January issue of the Monthly, it was stated that Dr. Fisher was from Staunton. We are sorry for the error as his correct address is Roanoke.

Erratum.

In the article "Routine Postoperative Use of Intravenous Tetracycline" by Dr. T. Stacy Lloyd, Jr., in the Virginia Medical Monthly 85:12, January 1958, the columns labelled "Nonmorbid" in Table I should be labeled "Total".

Northampton-Accomack Memorial Hospital.

The Staff of the Northampton-Accomack Memorial Hospital held its annual meeting on January 31, at which time the officers for the year were installed. Present also at the meeting were members of the Governing Board of the Hospital, representatives of the Boards of Supervisors of the two counties, and other invited guests.

Dr. Don S. Daniel, of the Johnston-Willis Hospital in Richmond, spoke, calling attention to the advances which have been made in the Hospital during the past 29 years since he first came as the Resident Surgeon.

The new President for the year 1958 is Dr. W. J. Sturgis, Jr. He spoke also, calling attention to the changed conditions with regard to nursing services and the necessity for constant improvement in nursing care of the patients. Dr. J. E. Gladstone was installed as Vice-President and Dr. E. M. Henderson as Secretary.

This was also our Ladies night, and the group were served by the Guilds of Hungars Church.

Gifts were presented to 3 members of the Governing Board of the Hospital who had given long and faithful services. These were Mr. J. Brooks Mapp, Attorney, of Keller, Virginia, Mr. James S. Rogers, of Nassawadox, Virginia, and Mrs. George Walter Mapp, Sr., of Accomac, Virginia. A presentation was also made on behalf of the Staff to Dr. W. J. Sturgis, Jr., who will be serving his second year as President of the Staff.

W. C. Henderson, M.D.
Corresponding Secretary

Dr. Ira L. Hancock, Jr.,

Creeds, has been elected Illustrious Potentate of Khedive Temple, Norfolk. The temple is a unit of the Shrine branch of the Masonic Order.

Dr. Whaley Honored.

Dr. Harry E. Whaley has been named as Victoria's outstanding citizen of the year. He was cited by the Chamber of Commerce for his "loyal and devoted service to the citizens of the community". Dr. Whaley is the first citizen of Victoria to be so honored by the local Chamber of Commerce.

Drs. Ransom, McLelland and Landes.

Three Danville doctors, Drs. Charles L. Ransom, Robert McLelland and Ralph R. Landes, are receiving widespread recognition for a recent scientific development. They have developed a new method of injecting carbon dioxide into the region around the kidneys and adrenal glands for the purpose of outlining these organs for x-ray examination. They have been invited to present their methods at the meeting of the American Urological Society in New Orleans in April and the American Medical Association meeting in San Francisco in June. They have been presented with the First Award for their work by the Southeastern Branch of the American Urological Association.

Phi Lambda Kappa,

National Medical fraternity, will hold its sixth annual interim scientific meeting, at the Deauville Hotel, Miami Beach, Florida, April 13-20. The program will be for the benefit of the general practitioner and will feature papers and symposia by specialists in their fields. All members of the medical profession are welcome.

For registration and information, write Dr. Samual L. Lemel, national secretary, 1030 Euclid Ave., Cleveland 15, Ohio.

Dr. D. Coleman Booker,

Recently of Richmond, has opened his practice in Hopewell. He will be engaged in general surgery and gynecology. Dr. Booker was attendant surgeon at St. Elizabeth's Hospital, Richmond.

International Congress of Allergology.

The Third International Congress will be held in Paris, France, October 19-26, 1958. There will by symposia on asthma and emphysema, immunology, recent clinical advances, biochemical aspects, auto-immune reactions, dermatology and socio-economic aspects. There will also be sectional papers and round table small group luncheon conferences. For all information regarding the program and papers, write Dr. Samuel M. Feinberg, 303 East Chicago Ave., Chicago, Illinois.

Hospital Staff Members.

Dr. Herman I. Pifer has been named president of the staff of Memorial Hospital, Winchester. Dr. George H. Smith is vice-president; Dr. Robert S. Boyd, secretary; and Dr. Monford D. Custer, Jr., treasurer.

Dr. W. C. Humphries has been elected president of the Warren Memorial Hospital, Front Royal. Other officers are: vice-president, Dr. F. Dixon Whitworth, and secretary-treasurer, Dr. Dennis P. McCarty.

Dr. William D. Dolan

Has been named chairman of the service committee of the Arlington County Unit, American Cancer Society.

Dr. Ben C. Jones, Jr.,

Has been appointed as 1958 Heart Fund chairman for the City of Alexandria.

Pan American Medical Women's Alliance.

This Alliance will hold its sixth Congress at the McAllister Hotel, Miami, Florida, April 14-17. All women doctors are invited to attend. The purpose of the Alliance is to bring medical women of North, South and Central America into an association with each other for mutual improvement.

A Caribbean cruise is being planned as a post-congress trip.

Further information may be obtained from Dr. Alma Trappolini, 2291 Coral Way, Miami, Florida.

Psychiatric Speakers Bureau

The General Practitioner Education Project, jointly sponsored by the American Psychiatric Association and the American Academy of General Practice, is interested in the development of post-graduate psychiatric education for the family physician. One of the services which is offered by the Project is a Speakers Bureau, which is prepared to offer names of psychiatrists who are willing to serve as guest lecturers while they are taking their vacation trips. Medical societies, hospitals, etc., which are interested is obtaining names of psychiatric speakers, please contact the G.P. Project, American Psychiatric Association, 1785 Massachusetts Avenue, N.W., Washington, D.C.

Virginia Association of Medical Assistants.

The annual meeting of this Association will be held in Petersburg, March 8-9. Miss Beryl Zehmer, president of the Petersburg Chapter, will preside. Report of the AAMA convention in California will be given by Misses Lucy Carwile and Helen Cyrus. Physicians Products Company, Petersburg, will be hosts at the luncheon, and Van Pelt and Brown, Richmond, the Hospitality Hour. Dr. Abner Robertson, Director of the Virginia Association of Mental Health, will be guest speaker at the banquet.

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Obituaries . . . .

Dr. Levin Freeland Magruder,

Portsmouth, died January 31st, having been in ill health for some years. He was seventy-eight years of age and a native of Mississippi. Dr. Magruder received his medical degree from Tulane University in 1905. He served during World War I as director of the x-ray department of the University of Virginia Base Hospital. When he returned from France, Dr. Magruder became director of radiology at the Norfolk General Hospital and served in that capacity for more than twenty years. He resigned in 1939 due to ill health and in 1941 moved to Portsmouth where he served on the staffs of the Kings Daughters and Maryview Hospitals until his retirement in 1955.

Dr. Magruder was a Life Member of The Medical Society of Virginia, having joined in 1920.

His wife survives him.

Dr. John Albert Berchard Lowry,

Prominent physician of Crewe, died February 4th, at the age of sixty-seven. He was a graduate in medicine of the University of Maryland in 1915 and had practiced in Crewe since 1919. Dr. Lowry was a vice president of the Bank of Crewe and served on the board of trustees of Randolph-Macon College, Ashland. He was a charter member and Past Commander of the American Legion Post in Crewe and a charter member and past President of the local Kiwanis Club. Dr. Lowry was a past master of the Crewe Lodge No. 123, AF&AM. He was a veteran of World War I and served overseas for twenty-two months as Captain in the Medical Corps. Dr. Lowry had been a member of The Medical Society of Virginia since 1924.

His wife, two sisters and five brothers survive him.

Dr. Robert Herring Wright, Jr.,

A prominent physician of Hampton, died January 13th, after a long illness. He was fifty-two years of age and a native of Baltimore. Dr. Wright graduated in medicine from the University of Pennsylvania in 1929 and served a residency there from 1929 to 1931.

Dr. Wright was a past president, secretary and treasurer of the Virginia Peninsula Academy of Medicine. He was also past secretary and treasurer of the Medical Staff of Elizabeth Buxton Hospital and a member of the staff of Mary Immaculate Hospital. At the time of his death, Dr. Wright was chief cardiologist at Dixie Hospital. He was a member of the Hampton County Medical Society and The Medical Society of Virginia, having joined in 1933.

Dr. Wright is survived by his wife, two sons and a daughter.

The following resolutions were adopted by the Dixie Hospital Medical Staff:

BE IT RESOLVED that Dr. Wright's untimely death is a major loss to his community and to the medical profession, and that we, his friends and colleagues shall greatly miss him. We extend our deepest sympathy to his bereaved family and

BE IT FURTHER RESOLVED, that a copy of this Resolution be spread on the minutes of the Medical Staff of Dixie Hospital, Hampton Medical Society and copies be sent to the family and to the Virginia Medical Monthly.

Dr. Gayle.

A past-president and member of the Richmond Academy of Medicine for forty years, Dr. Robert Finley Gayle, Jr., died in Richmond November 4, 1957. In his death this community lost a champion who through his personal recognition in the field of psychiatry represented Richmond throughout this country and abroad. Few physicians in our time have had the opportunity to present to so many people the heritage as we know it of the Southland, of Virginia, and of Richmond. A product of this culture, Dr. Gayle was born December 18, 1891, in Norfolk County. He was reared in the family of a presiding elder of the Methodist church and since his father's duties carried him to many sections of the state, Dr. Gayle had the opportunity at an early age to sample the finer differences in cultural patterns throughout Virginia as he lived within them.

Dr. Gayle was educated in the public schools of Virginia and graduated with the Degree of Doctor of Medicine from the Medical College of Virginia in 1915. He served his internship and residencies in Philadelphia and New York, following which he served in the U.S. Army during World War I in France and Germany. He was Division Psychiatrist of the Third Division, AEF, in the Army of Occupation. . . . . He began practice with Dr. Beverley R. Tucker and continued this association until 1929. At that time he decided to enter private practice alone. His association with the Medical College as a teacher began in 1919, and he was Professor of Psychiatry and Neurology and Chairman of the Department from 1938 until his death.

Dr. Gayle was a Life Fellow of the American Psychiatric Association, its Secretary for four years, and ultimately its President. He was a member of the American Neurological Association, a past-president of the Southern Psychiatric Association, a member of the Ameri-

can Academy of Neurology, a Fellow of the American College of Physicians, a Fellow of the American Medical Association, past-president of the Virginia Neuropsychiatric Society, and a member of the Association for Research in Nervous and Mental Diseases.

. . . . . Throughout his professional career he was actively interested in improving the state's mental hospital program and was a member of the original State Hospital Board from 1937 until his death.

. . . . . .

The impact of the loss of such a man to his profession, his community, and to his alma mater is difficult to quantitate. The story of his effectiveness is not written in the length of his bibliography, although this was extensive; it is not written in his memberships in professional societies, although these were legion; it is not written entirely in the memories of his former students, even though many hundreds will remember him well for his lectures and case discussions. Dr. Gayle shared the conviction that the first and foremost duty of every physician is to treat the sick. He pursued this goal with singleness of purpose which carried to the very end of his professional career. The onset of his terminal illness occurred at a patient's bedside. In his pursuit of this goal he was endowed with an unsurpassed intuitive capacity to ferret out basic physical as well as emotional malfunction. He was not afraid to admit that some of his decisions were based on what he called his "bird dog sense." Others observing this, however, might say that through many years of restless listening, he had unconsciously learned to recognize and calibrate many of the subtleties and nuances which develop in the doctor-patient relationship. Because of these factors, Dr. Gayle's teaching ability was most appreciated by those who were able to observe firsthand his skill with patients. Conscious of the fact that he was less articulate in the lecture hall, he delegated increasing responsibility for this phase of medical teaching to his associates. His physical appearance was a provocative beginning for the treatment situation. With his portly size, immaculate dress, courtly manner and guard's mustache he was certain to provoke an immediate response of either extreme paternal confidence or unmollified rebellion, depending upon the sick needs of the patient. With the capacity for earthiness as need be, the least as well as the most sophisticated were as easily disarmed. He was further distinguished for his ability in clinical judgment and for an unerring rapidity in making important decisions. In this trait he had the unshakable strength of his convictions and, as in the case of a man who moves in a positive manner, he did not hesitate to provoke disagreement. These are a few of the intangibles which he mastered.

Among the more tangible records of his achievement would be his pioneering work in the description and treatment of heavy mental intoxications, the earlier treatment of Parkinsonism with whole root belladonna alkaloids, the function of the psychiatric until as an integral part of a general hospital, and more recently the encouragement of a realistic and harmonious understanding between psychiatry and religion. His leadership in professional organizations was recognized first in Richmond, secondly, in the state, thirdly, in the South, and ultimately in the nation. It is further tribute to his stabilizing influence and valued opinion that the Council of the American Psychiatric Association invited him to serve on its executive committee beyond the accustomed time.

Dr. Gayle satisfied his personal needs entirely in the society of his fellow man. His reputation for conviviality and an inexhaustible supply of poignant anecdotes ran a close second to that of his professional prowess. Dr. Gayle will long be remembered for the part he played in helping establish the reputation of the Medical College of Virginia through its Department of Psychiatry. Professionally, however, he will probably be remembered longest in the hearts of his patients and in the memories of those fortunate enough to observe his therapeutic effectiveness.

BE IT RESOLVED, THEREFORE, that these resolutions be spread upon the minutes of this Society, and a copy forwarded to his family with our deepest sympathy.

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1. Pitt, M. B.: Leukorrhea. Causes and Management, J. M. A. Alabama *25*:182 (Feb.) 1956.
2. Parker, R. T.; Jones, C. P., and Thomas, W. L.: Pruritus Vulvae, North Carolina M. J. *16*:570 (Dec.) 1955.

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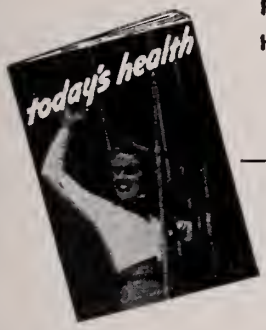
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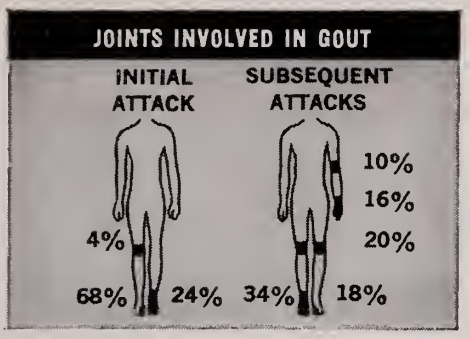
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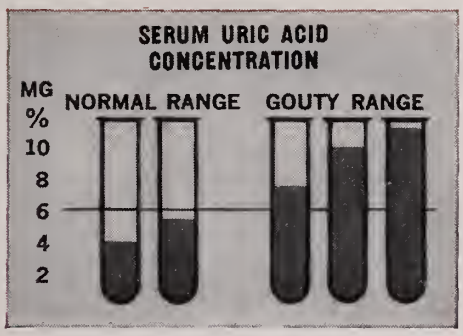
The next meeting of the Virginia Board of Medical Examiners will be held in the Richmond Hotel, Richmond, Virginia, June 11, 1958. The examinations will be held in the same hotel June 12th to 14th, inclusive. All applications and other documents pertaining to the examinations or to matters to be discussed by the Board must be on file in the Secretary's office on or before May 20, 1958. The Secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.



1. Recurrent joint pain followed by long periods of complete remission. *(Percentages refer to incidence.)*



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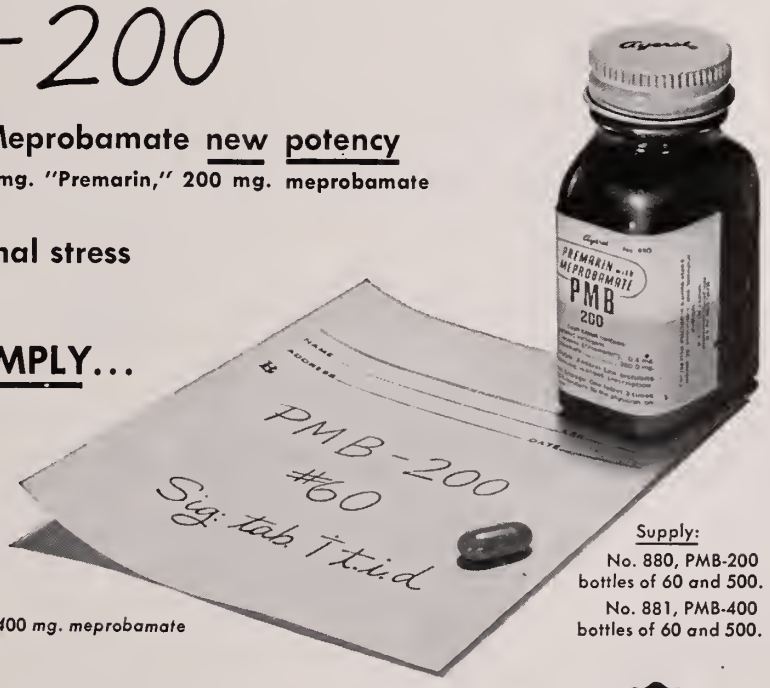
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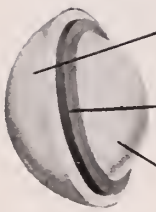
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for dependable prophylaxis
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NITROGLYCERIN—
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15 mg. (1/4 grain)—prolongs action

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With type as well as amount of fat in the human diet now assuming such importance, the new role of corn oil as a source of unsaturated fatty acids has prompted these questions:

1 What is the role of unsaturated fats in the daily diet?

answer: There is now ample clinical evidence that unsaturated fats tend to lower the serum cholesterol level of human subjects, whereas saturated fats have the opposite effect.

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answer: MAZOLA Corn Oil yields an average of 85 per cent unsaturated fatty acids. 100 grams of MAZOLA will yield: 53 grams of linoleic acid and 28 grams of oleic acid; it also provides 1.5 grams of sitosterols, and only 12 grams of saturated fatty acids.

3 What is the best way to provide unsaturated fatty acids?

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the best broad-spectrum antibiotic to use is

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Squibb Tetracycline Phosphate Complex (Sumycin) and Nystatin (Mycostatin) — Sumycin plus Mycostatin

for practical purposes, Mysteclin-V is sodium-free

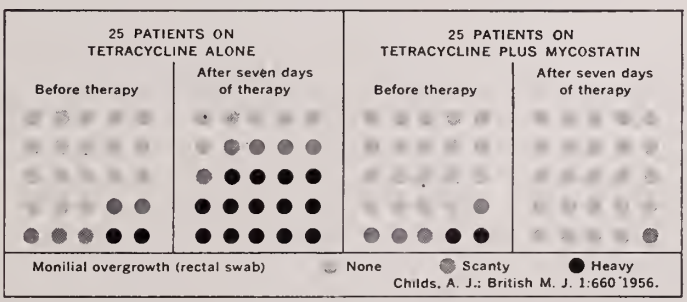
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Childs, A. J.: British M. J. 1:660 1956.

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6 mg. tablets and 5 mg. per cc. ampuls and vials
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1. Murphy, H. L., and Klasson, D. H.: New York St. J. M. 57:1908, June 1, 1957

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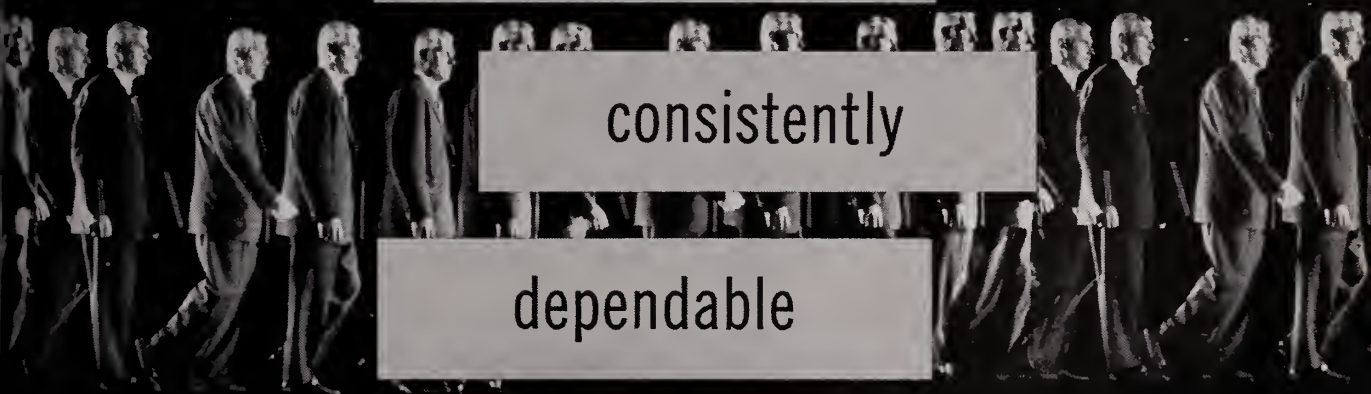
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new study[1]

shows why

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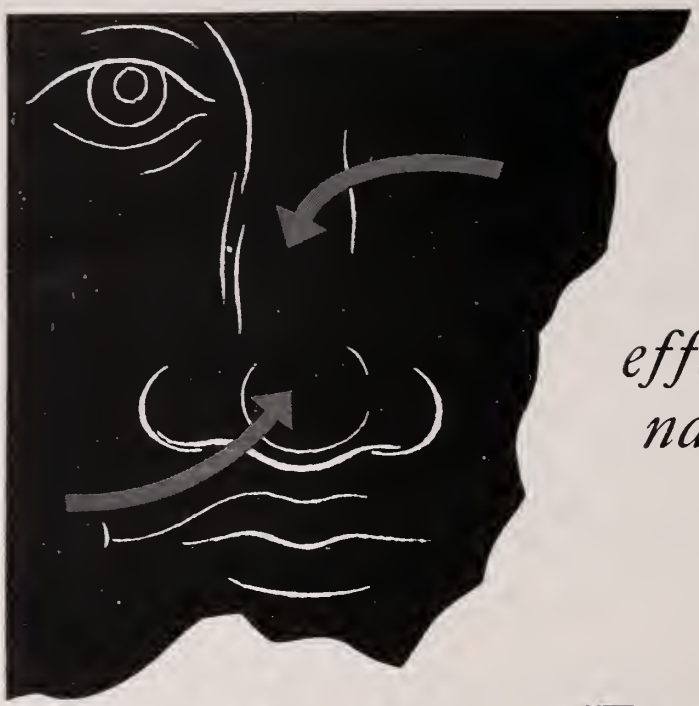


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for prompt, more complete, day-and-night relief in the ***common cold nasal allergies sinusitis***

Realistic dosage of the potent vasoconstrictor, phenylephrine hydrochloride, combined with the dependable antihistamine, pyrilamine maleate... for mutually enhancing, oral efficacy in clearing stuffy nose, combatting allergic turgidity, draining clogged sinuses, relieving postnasal drip.

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Phenylephrine HCl U.S.P.	10 mg.	15 mg.
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*Timed Disintegration Capsule affords up to 8 hours relief.

DOSAGE: 1 to 2 tablets p.c. Children 1 tablet, p.c. or 1 capsule b.i.d., 12 hours apart (adults)

SUPPLIED: Bottles of 100 green tablets or orange T.D. Capsules

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NICOZOL relieves mental confusion and deterioration, mild memory defects and abnormal behavior patterns in the aged.

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Pentylenetetrazol . . 100 mg.
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1. Levy, S., *JAMA.*, 153:1260, 1953
2. Thompson, L., Procter R., *North Carolina M. J.*, 15:596, 1954
3. Thompson, L., Procter, R., *Clin. Med.*, 3:325, 1956



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1. Comparative Effects of Various Rauwolfia Alkaloids in Hypertension; *Diseases of the Chest;* in press.

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Reference: 1. J.A.M.A. 158:386 (June 4) 1955.

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Combines Meprobamate (*400 mg.*) the most widely prescribed tranquilizer . . . helps control the "emotional overlay" of ileitis — without fear of barbiturate loginess, hangover or habituation . . . *with* PATHILON (*25 mg.*) the anticholinergic noted for its extremely low toxicity and high effectiveness in the treatment of many G.I. disorders.

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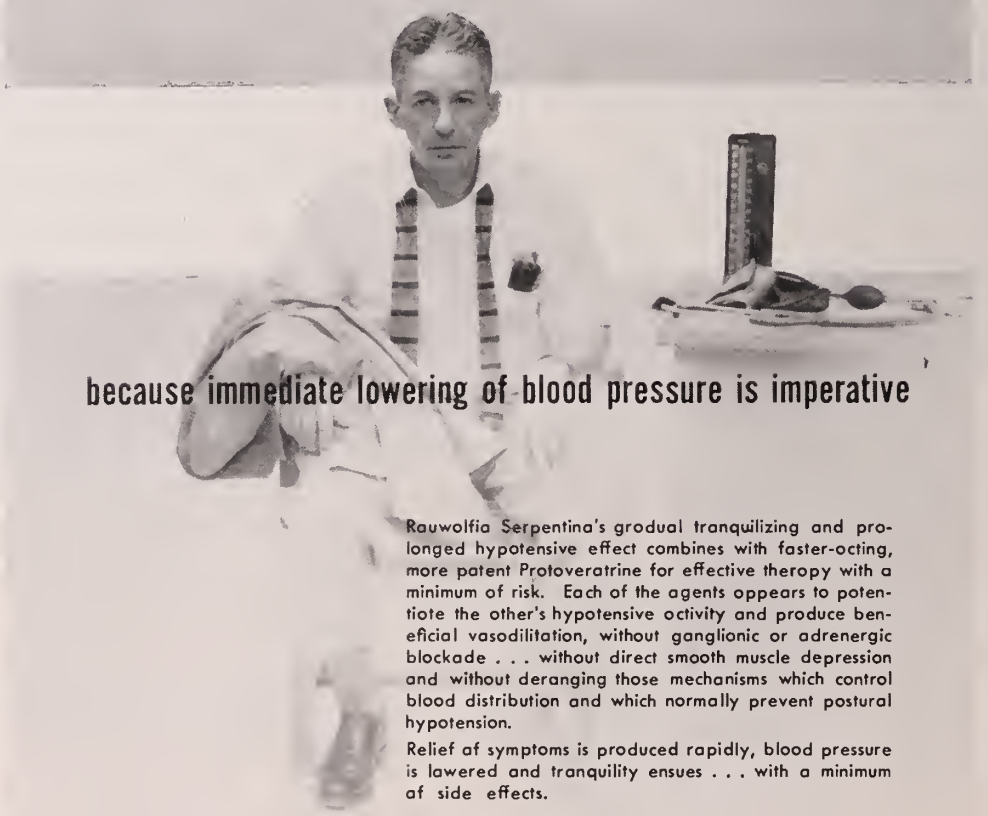
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diagnosis: **hypertension, moderate to severe**

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Rauwolfia Serpentina's gradual tranquilizing and prolonged hypotensive effect combines with faster-acting, more potent Protoveratrine for effective therapy with a minimum of risk. Each of the agents appears to potentiate the other's hypotensive activity and produce beneficial vasodilitation, without ganglionic or adrenergic blockade . . . without direct smooth muscle depression and without deranging those mechanisms which control blood distribution and which normally prevent postural hypotension.

Relief of symptoms is produced rapidly, blood pressure is lowered and tranquility ensues . . . with a minimum of side effects.

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actually lowers* gastric secretion

*Tests in a series of 25 patients show that there is "a definite and distinct lowering [of both volume of secretions and of free hydrochloric acid] in the majority of patients. . . . No patients had shown any increase in gastric secretions following administration of the drug."[1]

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3. It is effective in 9 of every 10 tense and anxious patients.
4. Five dosage forms give you maximum flexibility.

supplied: 10, 25 and 100 mg. tablets, bottles of 100. Syrup, pint bottles. Parenteral Solution, 10 cc. multiple-dose vials.

references: 1. Strub, I. H.: Personal communication. 2. Ayd, F. J., Jr.: presented at Ohio Assembly of General Practice, 7th Annual Scientific Assembly, Columbus, September 18-19, 1957.

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- Offers appetite stimulating Vitamins B_1, B_6, B_{12} and protei- upgrading l-Lysine, fortified with a readily absorbed, w - tolerated form of iron.
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PARTICULARLY FOR CHILDREN

Helps young appetites keep pace with the increased nutritical demands of childhood while supplying adequate amountsof essential iron.

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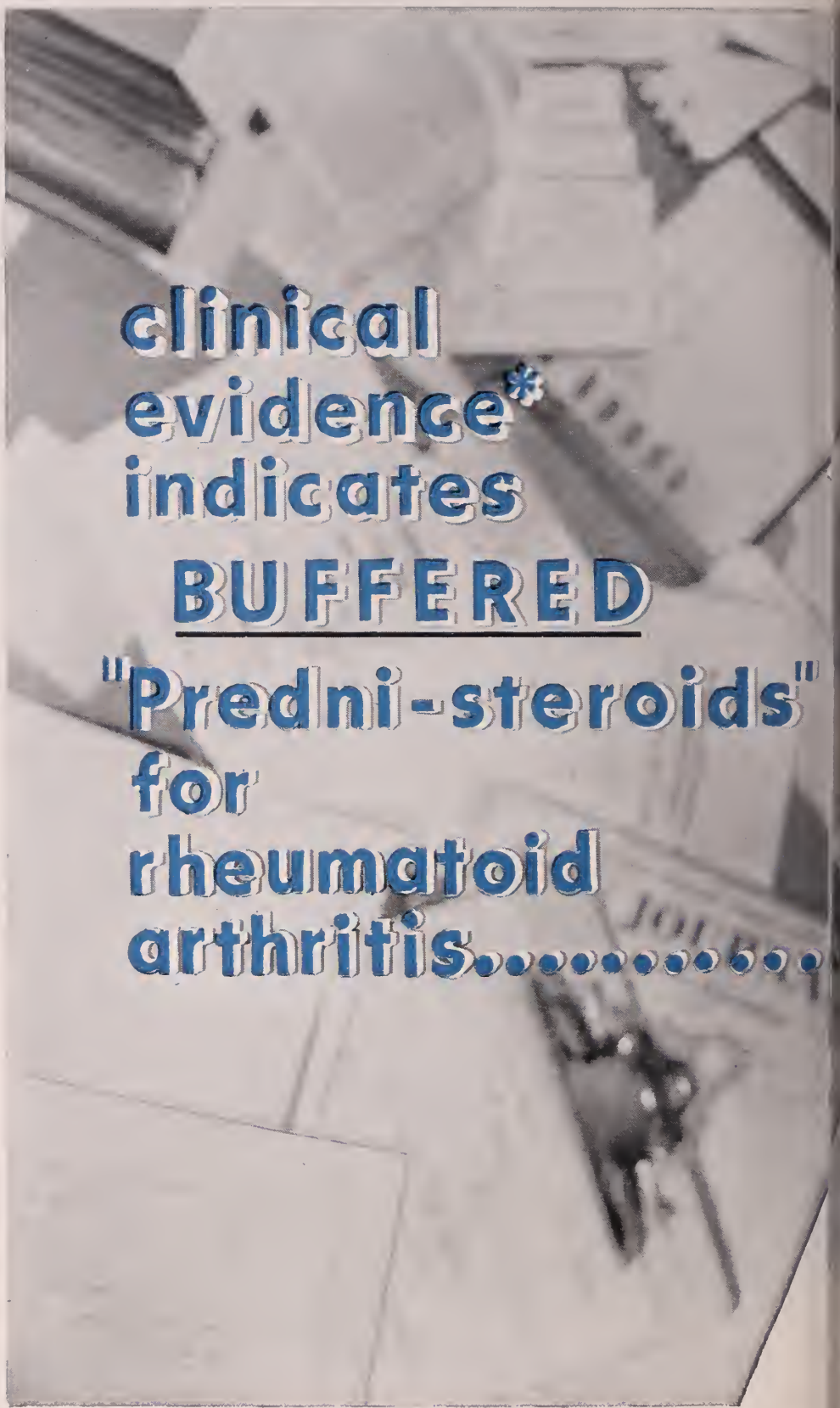
l-Lysine HCl	300 mg.
Ferric Pyrophosphate (Soluble)	250 mg.
Iron (as Ferric Pyrophosphate)	30 mg.
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Thiamine Mononitrate (B_1)	10 mg.
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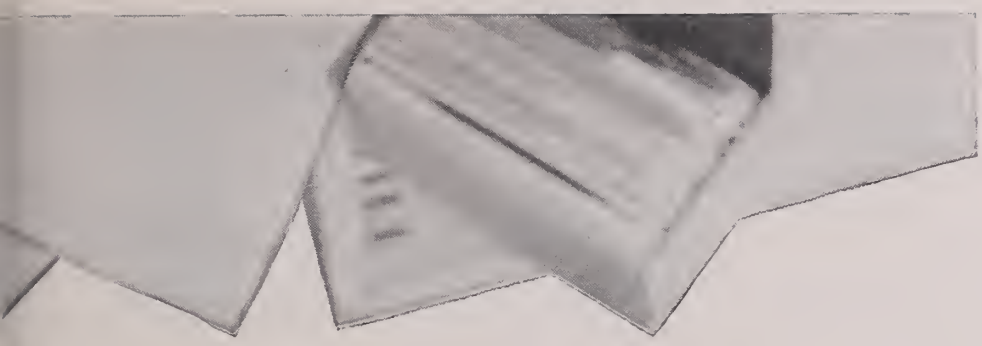
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*"It is our growing conviction that all patients receiving oral steroids should take each dose after food or with adequate buffering with aluminum or magnesium hydroxide preparations."—Sigler, J. W. and Ensign, D. C.: J. Kentucky State M. A. 54:771 (Sept.) 1956.

*"The apparent high incidence of this serious [gastric] side effect in patients receiving prednisone or prednisolone suggests the advisability of routine co-administration of an aluminum hydroxide gel."—Bollet, A. J. and Bunim, J. J.: J. A. M. A. 158:459 (June 11) 1955.

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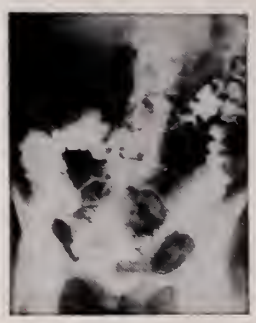


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2. Bleiberg, J.: J. M. Soc. New Jersey *53*:37, 1956.
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5. Bleiberg, J.: Am. Practitioner *8*:1404, 1957.



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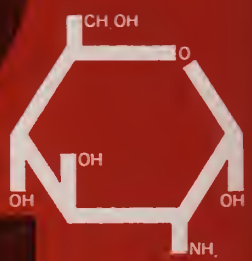
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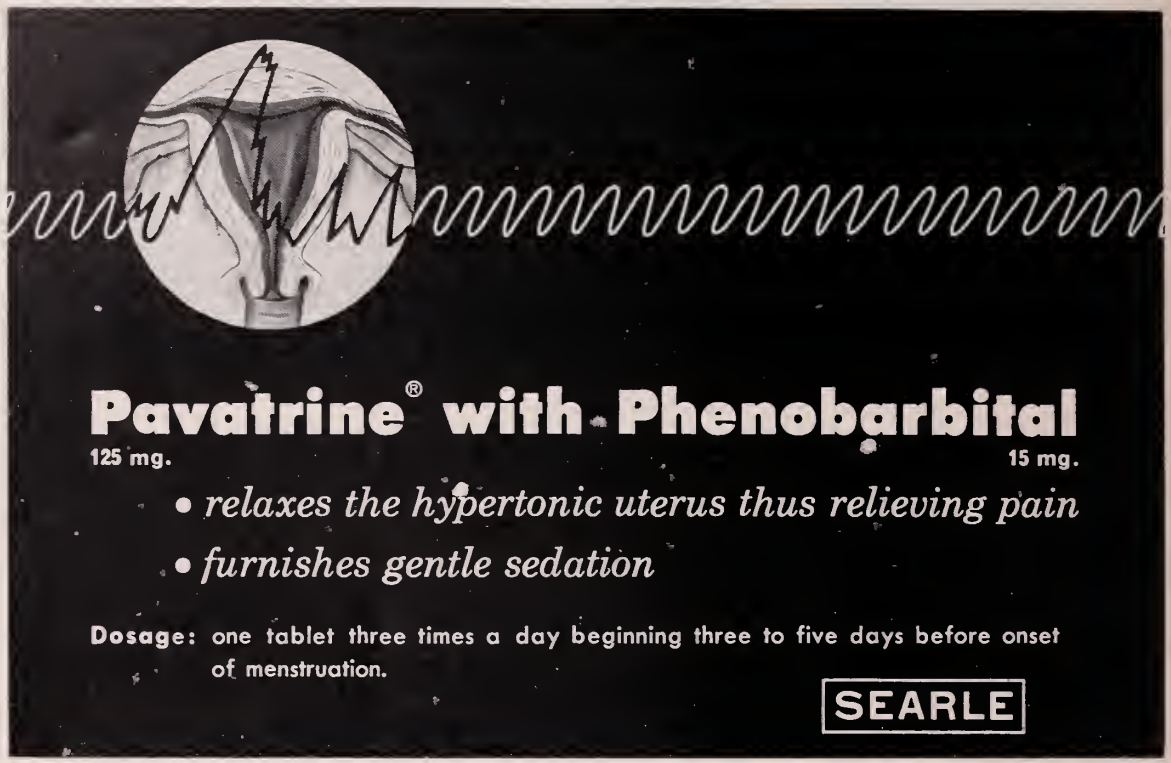
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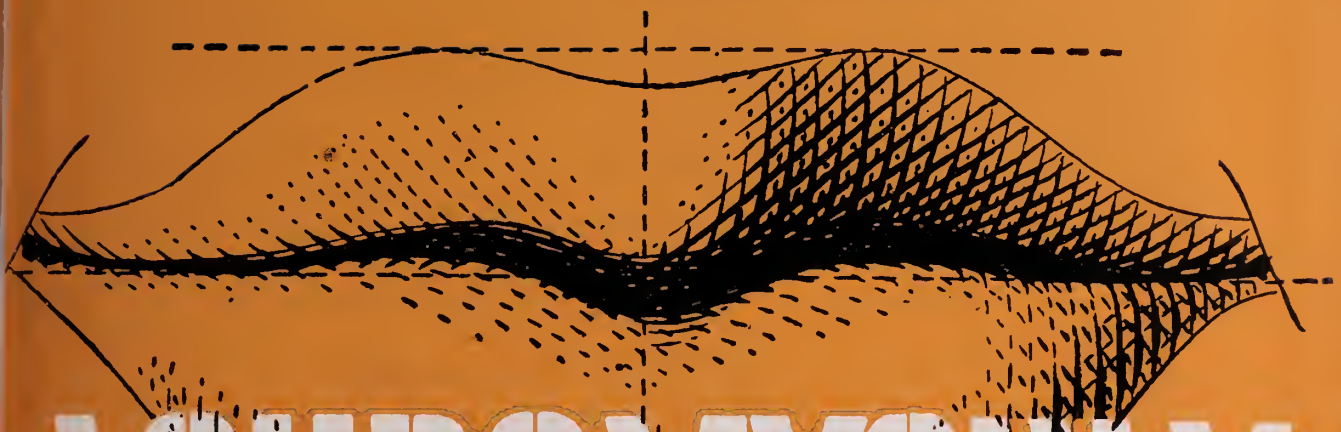
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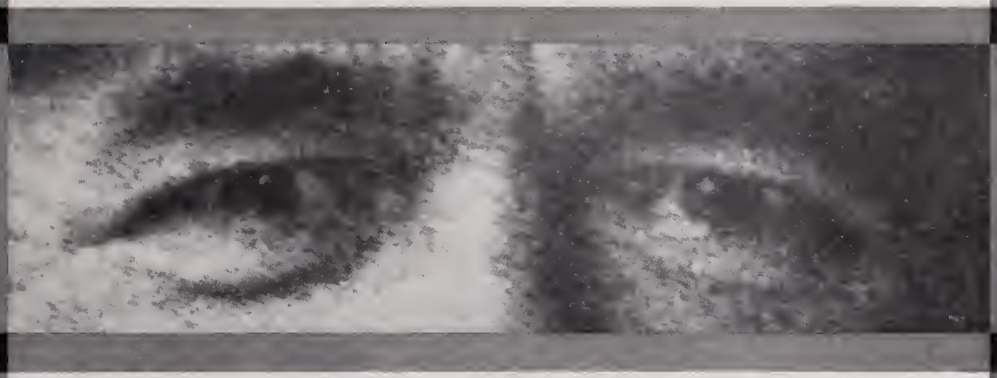
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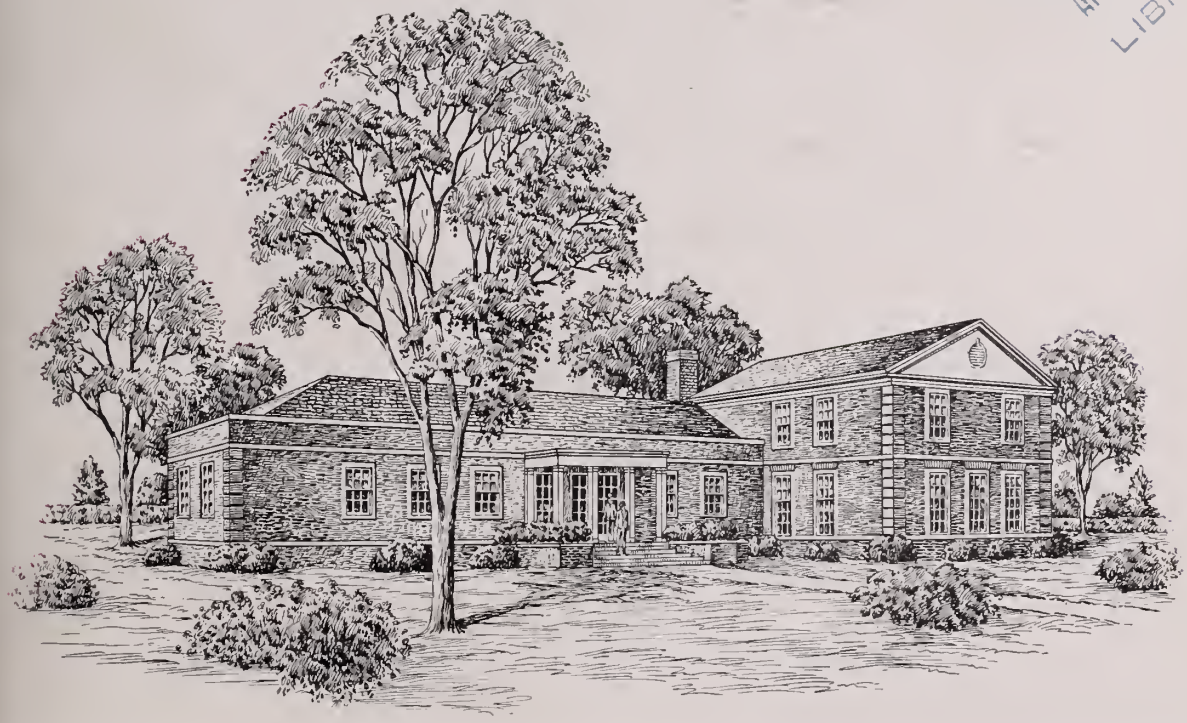
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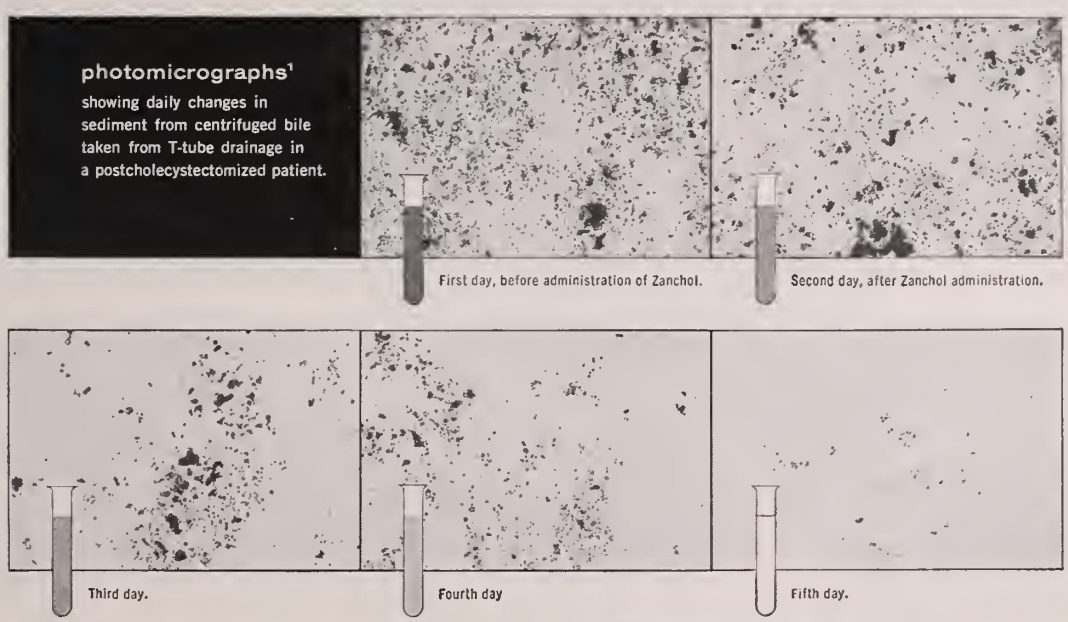
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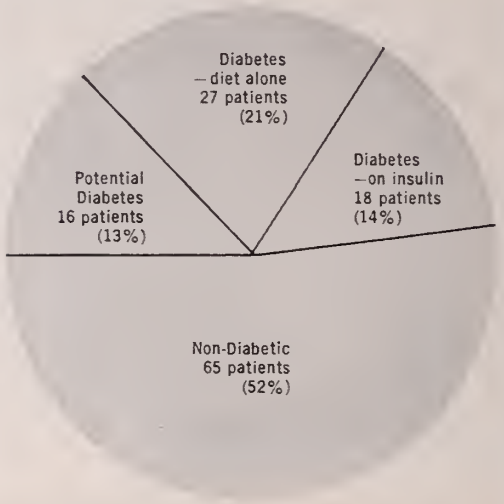
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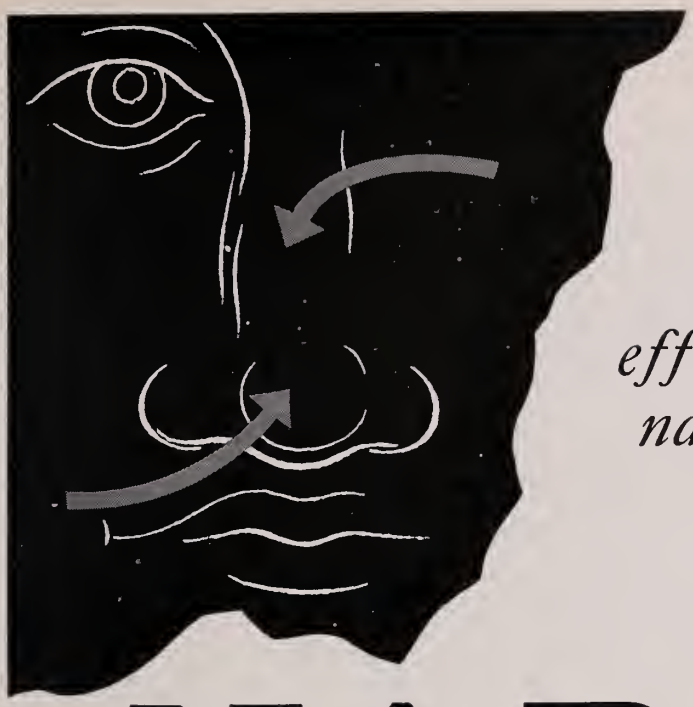
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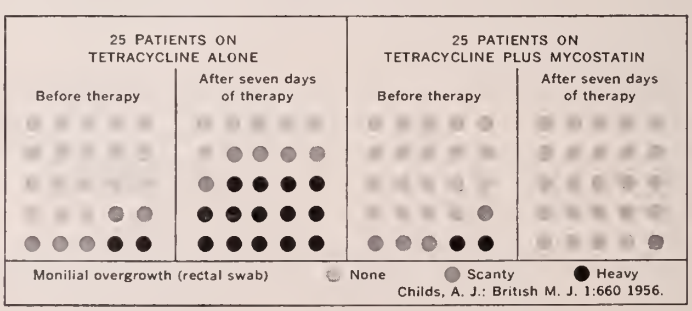
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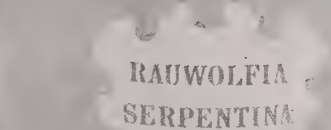
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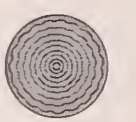
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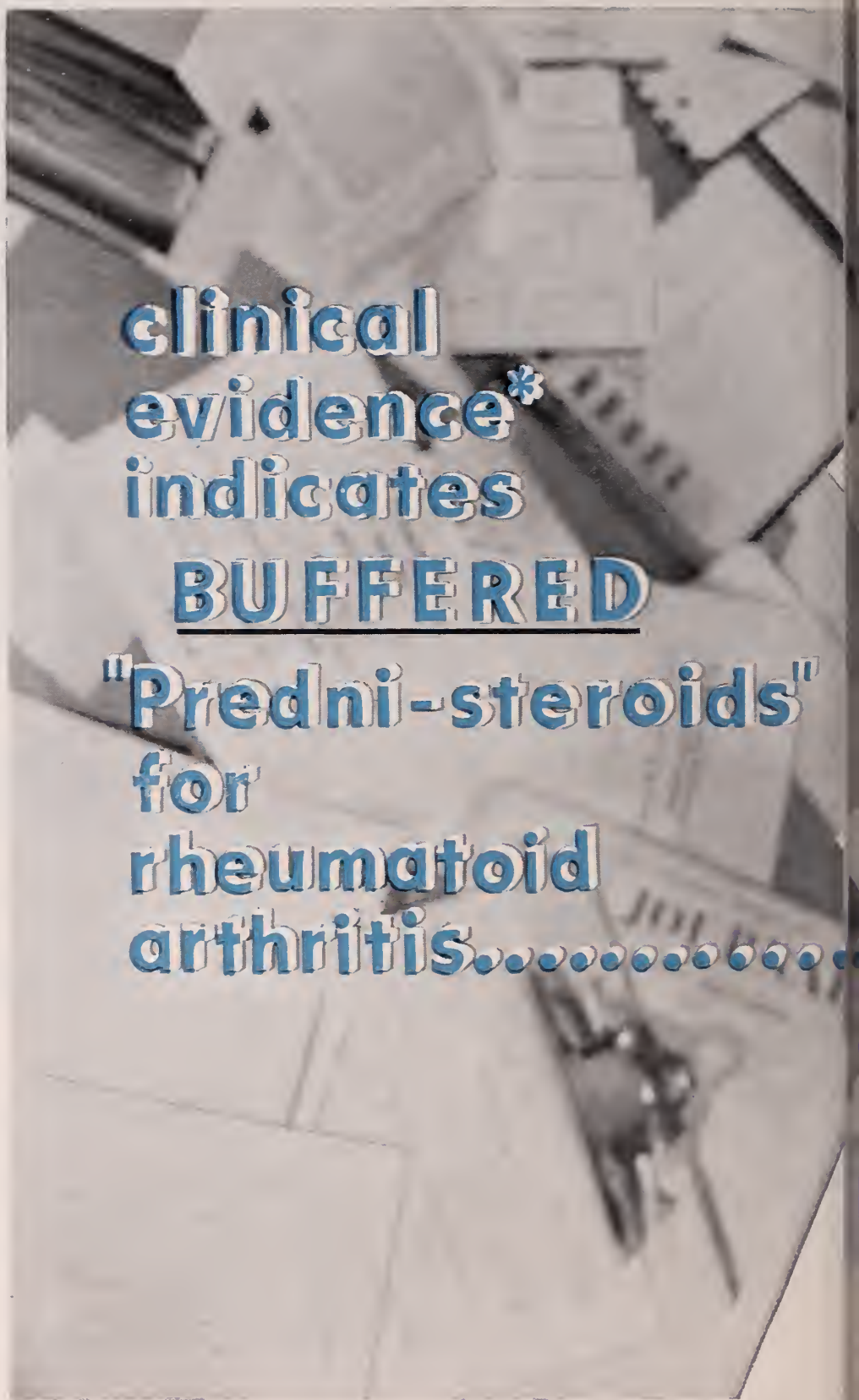
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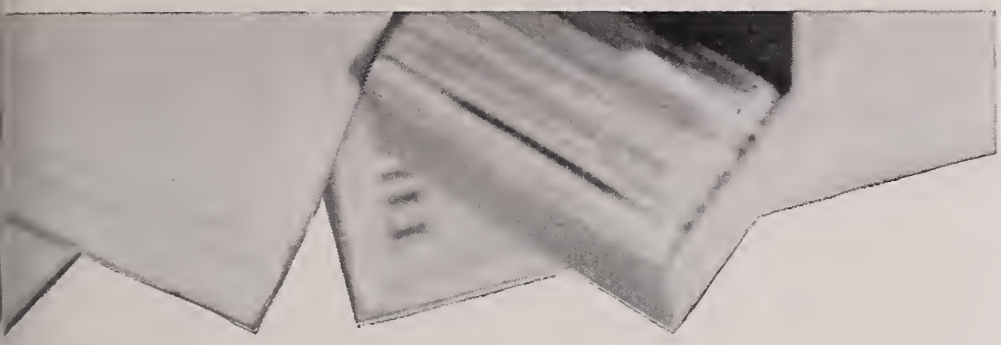
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State J. Med. 57:2049 (June
57.

*"It is our growing conviction that all patients receiving oral steroids should take each dose after food or with adequate buffering with aluminum or magnesium hydroxide preparations."—Sigler, J. W. and Ensign, D. C.: J. Kentucky State M. A. 54:771 (Sept.) 1956.

*"The apparent high incidence of this serious [gastric] side effect in patients receiving prednisone or prednisolone suggests the advisability of routine co-administration of an aluminum hydroxide gel."—Bollet, A. J. and Bunim, J. J.: J. A. M. A. 158:459 (June 11) 1955.

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metaphosphate produced markedly higher blood levels than capsules containing either the corresponding base or the hydrochloride alone. In addition, the average levels derived from the tetracycline base or the chlortetracycline base were higher than those produced by the corresponding hydrochloride though lower than those resulting from the mixture containing the base and sodium metaphosphate. In the study with chlortetracycline[6] capsules containing a mixture of the hydrochloride and sodium metaphosphate were also included in the crossover, and the average levels produced by these capsules were the same as with the mixture of chlortetracycline base with sodium metaphosphate.

Although the enhancement of blood levels of tetracycline by phosphate, either complexed to the tetracycline or mixed with the base or the hydrochloride, thus seemed fairly well established, some doubts still remained because certain reliable observers (including many whose results have not been published) failed to confirm the findings with the materials and methods they used. Further confusion seemed to be added by a subsequent report of Welch et al.,[7] who, in repeating a crossover study with capsules of tetracycline phosphate complex and tetracycline hydrochloride with and without sodium hexametaphosphate, found much higher

"...Tetracycline hydrochloride and citric acid, in an encapsulated mixture, produced higher serum concentrations and greater urinary excretions, and hence better absorption of tetracycline, than any other preparation studied..."

cycline base. Dicalcium phosphate and food resulted in lower, and sodium metaphosphate in higher, serum antibacterial activity than was observed in their absence. Oil and sorbitol did not interfere with tetracycline absorption.

Dicalcium phosphate is widely used as a filler in various capsules, including those of the tetracyclines. The authors cite a large number of other studies that implicate the presence of calcium ions as the cause of the reduced absorption of tetracyclines and show that citric acid can partially neutralize this effect. The depressing effect of food on the serum levels of tetracycline is likewise explained by the goodly amount of minerals contained in commercial laboratory diets and they postulate that the multivalent cations may be responsible for the poorer absorption of the drug. The authors could not explain the failure of citric acid to enhance serum concentrations when administered with tetracycline base in contrast to its marked effect when given as the hydrochloride. However, they hypothesized that the ability of citric acid to enhance serum levels of tetracycline is related to its ability to form complexes unavailable for

and citric acid and of sodium metaphosphate were published simultaneously with the last mentioned report of Welch et al.[7] These data were based on thoroughly controlled studies both in rats[8] and in man[9] and include additional findings that serve to explain, fairly conclusively, the various discrepancies that have been mentioned.

The experiments in rats[8] were carried out to study the effects of citric acid, dicalcium phosphate, sodium metaphosphate, food, oil and sorbitol on the serum antibacterial activity produced by the administration of tetracycline hydrochloride or tetracycline base. Citric acid administered in equal weight with tetracycline hydrochloride gave the highest concentrations of all the preparations studied. No enhancing effect was obtained from citric acid when given with tetra-

...addendum to the last mentioned paper ...h et al.[7] indicates that in their study the capsules of tetracycline hydrochloride, chlortetracycline hydrochloride and tetracycline phosphate complex all contained dicalcium phosphate as a filler, whereas the capsules containing citric acid and sodium hexametaphosphate did not contain any dicalcium phosphate. This could clearly explain the discrepancies noted in that study. Likewise, the inconsistencies in other studies may very well have been due to the presence of calcium as fillers in some of the capsules and not in others.

This, however, fails to explain the most recent findings of Welch and Wright,[10] who compared the absorption of three capsules, each containing 250 mg. of oxytetracycline hydrochloride — one without any adjuvant, one with 250 mg. of citric acid and the third with 380 mg. of sodium hexametaphosphate; no other filler was contained in any of these capsules. In trip

Editorial.
The New England Journal of Medicine.
258:97-99, (January 9) 1958

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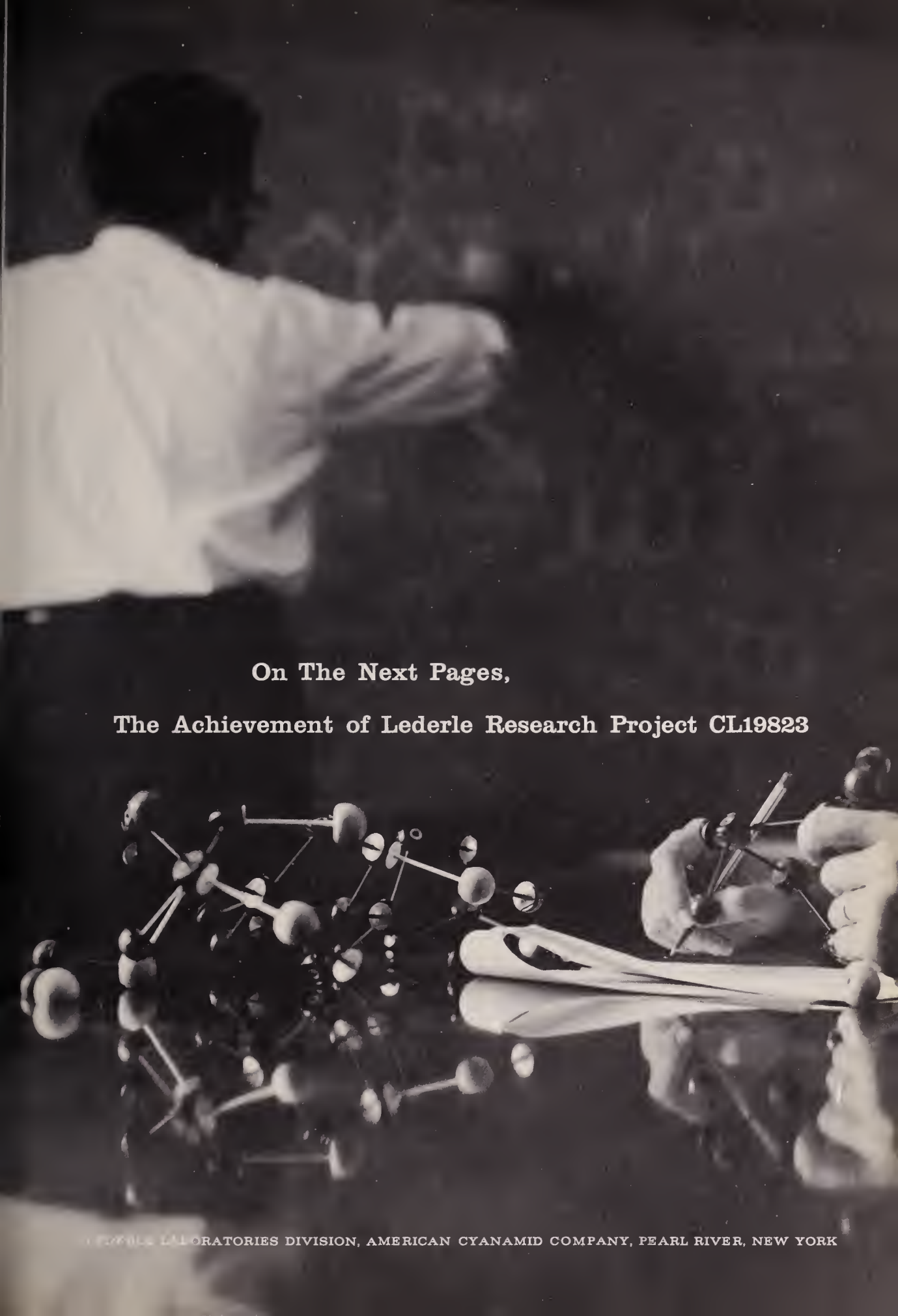
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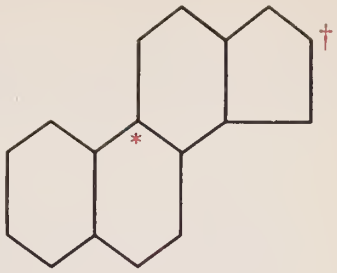
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- **a new high** in anti-inflammatory effects with lower dosage (averages 1/3 less than prednisone)
- **a new low** in the collateral hormonal effects associated with all previous corticosteroids
  - No sodium or water retention
  - No potassium loss
  - No interference with psychic equilibrium
  - Low incidence of peptic ulcer and osteoporosis

Biological Effects of Aristocort

with particular emphasis on:

Kidney function

Animal studies on ARISTOCORT[1] have not demonstrated any interference with creatinine or urea clearance. Autopsy surveys of organs of animals on prolonged study of this medication have shown no renal damage.

Sodium and water

ARISTOCORT produced an increase of 230 per cent of water diuresis and 145 per cent sodium excretion when compared to control animals.[1] Metabolic balance studies in man revealed an average negative sodium balance of 0.8 Gm. per day throughout a 12-day period on a dosage of 30 mg. per day.[2] Additional balance studies showed actual sodium loss when ARISTOCORT was given in doses of 12 mg. daily.[3] Other investigators observed significant losses of sodium and water during balance studies and that those patients with edema from some older corticosteroids lost it when transferred to ARISTOCORT.[4,5] In two studies of various rheumatic disorders (194 cases) on prolonged treatment, sodium and water retention was not observed in a single case.[6,7]

Potassium and chlorides

There was no active excretion of potassium or chloride ions in animals given maintenance doses of ARISTOCORT 25 times that found to be clinically effective.[1] Potassium balance studies in humans[2,3] revealed that negative balance did not occur even with doses somewhat higher than those employed for prolonged therapy in rheumatoid arthritis. Hypokalemia, hyperkalemia or hypochloremia did not occur, when tested, in 194 patients with rheumatoid arthritis treated for up to ten and one-half months.[6,7]

Calcium and phosphorus

Phosphate excretion in animals[1] was not changed from normal even with amounts 25 times greater (by body weight) than those known to be clinically effective. Human metabolic balance studies[3] demonstrated that no change in calcium excretion occurred on dosages usually employed clinically when the compound is administered for its anti-inflammatory effect. Even at a dosage level twice this, slight negative balance appeared only during a short period.

Protein and nitrogen balance

Positive nitrogen balance was maintained during a human metabolic study on maintenance dosage of 12 mg. per day.[3] At dosages two to three times normal levels, positive balance was maintained except for occasional short periods in metabolic studies of several weeks' duration.[2,3]

There was always a tendency for normalization of the A/G ratio and elevation of blood albumin when ARISTOCORT was used in treating the nephrotic syndrome.[8]



Liver glycogen deposition and inflammatory processes

An intimate correlation exists between the ability of a corticosteroid to cause deposition of glycogen in the liver and its capacity to ameliorate inflammatory processes.

In animal liver glycogen studies, relative potencies of ARISTOCORT over cortisone of up to 40 to 1 have been observed. Compared to ARISTOCORT, five to 12 times the amount of prednisone is required to produce varying but equal amounts of glycogen deposition in the liver.[1]

Most patients show normal fasting blood sugars on ARISTOCORT. Diabetic patients on ARISTOCORT may require increased insulin dosage, and occasional latent diabetics may develop the overt disease.

Anti-inflammatory potency of ARISTOCORT was determined by both the asbestos pellet[1] and cottonball[9] tests. It was found to be nine to 10 times more effective than hydrocortisone in this respect.

Gastric acidity and pepsin

The precise mode of ulcerogenesis during treatment with corticosteroids is not known. There is much experimental evidence for believing this may be related to the tendency of these agents to increase gastric pepsin and acidity—and this cannot be abolished by vagotomy, anticholinergic drugs or gastric antral resection.[10] Clinical studies[11] of patients on ARISTOCORT revealed that uropepsin excretion is not elevated. Further, their basal acidity and gastric response to histamine stimulation were within normal limits.

Central nervous system

The tendency of corticosteroids to produce euphoria, nervousness, mental instability, occasional convulsions and psychosis is well known.[12] The mechanism underlying these disturbances is not well understood.

ARISTOCORT, on the contrary, does not produce a false sense of well being, insomnia or tension except in rare instances. In the treatment of 824 patients, for up to one year, not a single case of psychosis has been produced. In general, it appears to maintain psychic equilibrium without producing cerebral stimulation or depression.

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The Promise of Aristocort in Reduction of Side Effects

It is axiomatic to affirm that the undesirable collateral hormone effects of corticosteroids increase in frequency and severity the higher the dosage and the longer used.

It has also become well recognized that the most serious of the major side effects from long-term corticosteroid treatment are peptic ulcers, osteoporosis with fracture, drug psychosis and euphoria, and sodium and water retention leading often to general tissue edema and hypertension.

It is significant that of the close to 400 patients on the lower dosage schedules found effective in bronchial asthma and dermatologic conditions, only 1 case of peptic ulceration has developed. No other of the above side effects have been observed even though ARISTOCORT was administered continuously to them for periods as long as one year.

The treatment of rheumatoid arthritis with steroids appears to result in the highest incidence of side effects. For this reason, the side effects associated with ARISTOCORT therapy in 292 patients with rheumatoid arthritis are reported below.

Peptic Ulcer

The occurrence of peptic ulcer in 292 patients with rheumatoid arthritis treated continuously for up to one year with ARISTOCORT is approximately 1 per cent (2 of the 3 occurred in patients transferred from prednisone). In the remaining 532 cases recently analyzed, only one ulcer has been discovered in a patient who apparently had no ulcer when he was changed from another steroid.

Osteoporosis and Compression Fractures

The occurrence of osteoporosis with compression fracture in 292 patients with rheumatoid arthritis treated continuously for up to one year with ARISTOCORT is 0.33 per cent (1 case[1]). Although these results are encouraging, determination of the true incidence of osteoporosis will have to await the passage of more time.

Euphoria and Psychosis

The euphoria so commonly produced by all previous corticosteroids has seemed a most desirable attribute to patients. In penalty, however, they have often later to pay for this by mental disturbances, varying from mild and transitory to severe depression and psychosis,[2] and toxic syndromes producing even convulsions and death.[3]

Since the onset of these complications is not directly related to duration of steroid administration,[4] the fact that not one case of psychosis occurred in 824 patients treated with ARISTOCORT, is most encouraging.

Sodium Retention—Hypertension—Potassium Depletion

When 17 patients were changed from prednisone to ARISTOCORT, 11 rapidly lost weight although only one had had visible edema.[5] Sodium and water retention, hypokalemia or hyperkalemia and steroid hypertension did not appear in 194 rheumatoid arthritis patients treated with ARISTOCORT.[1,6]

The interrelation between blood and body sodium, and steroid hypertension has long been generally appreciated.[7,8] Except in rare instances, or when unusually high doses are used (e.g., leukemia), the problem of edema and hypertension caused by sodium and water retention, has been eliminated with ARISTOCORT.

Minor Side Effects

Collateral hormonal effects of less serious consequence occurred with approximately the same frequency as with the older corticosteroids.[1] These include erythema, easy bruising, acne, hypertrichosis, hot flashes and vertigo. Several investigators have reported symptoms not previously described as occurring with corticosteroid therapy, e.g., headaches, lightheadedness, tiredness, sleepiness and occasional weakness.

Moon facies and buffalo humping have been seen in some patients on ARISTOCORT. However, ARISTOCORT therapy, in many instances, resulted in diminution of "Cushingoid" signs induced by prior therapy. Where this occurs, it may be related to reduced dosage on which patients can be maintained.

Reduction of dosage by one-third to one-half

In a double-blind study of comparative dosage in patients with rheumatoid arthritis,[9] 70 per cent of the cases were as well controlled on a dose of ARISTOCORT one-half that of prednisone. A general recommendation can be made that ARISTOCORT be used in doses two-thirds that of prednisone or prednisolone in the treatment of rheumatoid arthritis. There are individual variations, however, and each patient should be carefully titrated to produce the desired amount of disease suppression.

Comparative studies, of patients changed from prednisone, indicate reduced dosage of ARISTOCORT in bronchial asthma and allergic rhinitis (33 per cent),[5] and in inflammatory and allergic skin diseases (33-50 per cent).[10,11]

General Precautions and Contraindications

Administration of ARISTOCORT has resulted in lower incidence of major serious side effects, and in fewer of the troublesome minor side effects known to occur with all previously available corticosteroids. However, since it is a highly potent glucocorticoid, with profound metabolic effects, all traditional contraindications to corticosteroid therapy should be observed.

No precautions are necessary in regard to dietary restriction of sodium or supplementation with potassium.

Since ARISTOCORT has less of the traditional side effects, the appearance of sodium and water retention, potassium depletion, or steroid hypertension cannot be used as signs of overdosage. As a rule patients will lose some weight during the first few days of treatment as a result of urinary output, but then the weight levels off.

Patients do not develop the abnormally voracious appetite common to previous corticosteroid administration. In fact, some patients experienced anorexia, and it is advisable to inform patients of this and to recommend they maintain a normal intake of food, with emphasis on liberal protein intake.

While precipitation of diabetes, peptic ulcer, osteoporosis, and psychosis can be expected to appear rarely from ARISTOCORT, they must be searched for periodically in patients on long-term steroid therapy.

Traditional precautions should be observed in gradually discontinuing therapy, in meeting the increased stress of operation, injury and shock, and in the development of intercurrent infection.

There is one overriding principle to be observed in the treatment of any disease with ARISTOCORT. *The amount of the drug used should be carefully titrated to find the smallest possible dose which will suppress symptoms.*

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Lederle

The Promise of Aristocort in Rheumatoid Arthritis

◊ ARISTOCORT *therapy has been intensely and extensively studied for periods up to one year on 292 patients with rheumatoid arthritis.*

Significant is the fact that most patients were *severe* arthritics, transferred to ARISTOCORT from other corticosteroids because satisfactory remission had not been attained, or because the seriousness of collateral hormonal effects had made discontinuance desirable.

Results of treatment

Freyberg and associates[1] treated 89 patients with rheumatoid arthritis (A. R. A. Class II or III and Stage II or III). Of these, 51 were on ARISTOCORT therapy from three to over 10 months. In all but a few patients, satisfactory suppression of rheumatoid activity was obtained with 10 mg. per day. Thirteen were controlled on 6 mg. or less a day, and for periods to 180 days. The investigators reported therapeutic effect in most cases to be A. R. A. Grade II (impressive) and that marked reduction in sedimentation rates occurred.

Another interesting observation in this study: Of the 89 patients treated, 12 had active ulcers, developed from prior steroid therapy. *In six patients, the ulcers healed while on doses of* ARISTOCORT *sufficient to control arthritic symptoms.*

Hartung[2] treated 67 cases of rheumatoid arthritis for up to 10 months. He found the optimum maintenance dose to be 11 mg. per day. Nineteen of these patients were treated for six to 10 months with an "excellent" therapeutic response.

Dosage and course of therapy

The initial dosage range recommended is 14 to 20 mg. per day—depending on the severity and acuteness of signs and symptoms. Dosage is divided into four parts and given with meals and at bedtime. Anti-rheumatic effect may be evident as early as eight hours, and full response often obtained within 24 hours. This dosage schedule should be continued for two or three days, or until all acute manifestations of the disease have subsided, whichever is later.

The maintenance level is arrived at by reduction of the total daily dosage in decrements of 2 mg. every three days. The range of maintenance therapy has been found to be from 2 mg. to 15 mg. per day—with only a very occasional patient requiring as much as 20 mg. per day. Patients requiring more than this should not be long continued on steroid therapy.

The aim of corticosteroid therapy in rheumatoid arthritis is to suppress the disease only to the stage which will enable the patient to carry out the required activities of normal living or to obtain reasonable comfort. The maintenance dose of ARISTOCORT to achieve this end is arrived at while making full use of all other established methods of controlling the disease.

ARISTOCORT is available in 2 mg. scored tablets (pink); 4 mg. scored tablets (white). Bottles of 30.

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The Promise of Aristocort in Respiratory Allergies

About 200 patients with respiratory allergies have been treated with ARISTOCORT *for continuous periods up to eight months.*

Results of treatment

Sherwood and Cooke[1,2] gave ARISTOCORT to 42 patients with bronchial asthma and allergic rhinitis. Average dose needed to control the asthmatic group was approximately 6 mg. per day (range, 2 to 14 mg.). Results, which were called "good to excellent" in all but four, were achieved on one-third less than similarly effective doses of prednisone or prednisolone.

The investigators noted other major improvements in ARISTOCORT therapy over the older steroids. There was no increase in blood pressure in any patient: *on the contrary, in 12 patients, there was reduction of pressure when they were transferred to* ARISTOCORT. One patient had required auxiliary antihypertensive drug therapy; over a nine-week period on ARISTOCORT, the pressure gradually fell from 206/100 to 136/79. In another case, the pressure slowly dropped from 205/105 to 154/86.

The number of cases in which these investigators tried ARISTOCORT in allergic rhinitis was not large enough to provide significant averages. However, the range of effective therapy was from 2 to 6 mg. per day. These strikingly low daily doses resulted in control of all signs and symptoms.

Schwartz[3] treated 30 patients with chronic, intractable bronchial asthma. At an average daily dose of 7 mg., he reported "good to excellent" results in all but one. Spies,[4] Barach[5] and Segal,[6] reported similar results at average daily maintenance doses of 4 to 10 mg. of ARISTOCORT.

Dosage and course of therapy

The initial dosage range recommended is 8 to 14 mg. of ARISTOCORT daily. Although a rare, very severe case may require more than this on the first day of therapy, these dosages will usually result in prompt alleviation of dyspnea, wheezing and cyanosis. Patients are soon able to carry out a normal span of daily activity.

The maintenance level is arrived at by reduction of the total daily dose every three days in decrements of 2 mg.; in the over-all series, the average daily dose for bronchial asthma is approximately 8 to 10 mg. and for allergic rhinitis, 2 to 6 mg. per day. All total daily doses should be divided into four parts and given with meals and at bedtime. As in every condition where corticosteroids are employed, each patient's treatment should be individualized and the maintenance arrived at by careful titration against signs and symptoms of disease.

Patients with chronic bronchial asthma may require steroid therapy for several months. And since asthma may be associated with cardiac disease, especially in the older age groups, ARISTOCORT is particularly useful because of its ability to cause excretion of sodium and water.

ARISTOCORT is available in 2 mg. scored tablets (pink); 4 mg. scored tablets (white). Bottles of 30.

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The Promise of Aristocort

in Nephrotic Syndrome

◊ *Fourteen patients with the nephrotic syndrome have been treated with* ARISTOCORT *for continuous periods of up to six weeks.*

Results of treatment

Hellman and associates[1,2] noted that ARISTOCORT, because of its favorable electrolyte effects, may well be the most desirable steroid to date in treatment of the nephrotic syndrome. However, thus far its use has been reported in only 14 children, of whom 8 had a complete diuresis and disappearance of all abnormal chemical findings. Four of the patients had diuresis, but continued to show some abnormal chemical findings, while two patients with signs of chronic renal disease failed to respond.

Dosage and course of therapy

In order to produce maximal response, 20 mg. should be given daily until diuresis occurs. The dose should then be decreased gradually and maintained around 10 mg. a day. After the patient has been in remission for some time, it may be advisable to diminish the dose gradually and discontinue ARISTOCORT.

in Pulmonary Emphysema and Fibrosis

◊ *Eleven patients with pulmonary emphysema and/or fibrosis were treated with* ARISTOCORT *for continuous periods of over two months.*

Results of treatment

Only small series of cases observed by Barach,[3] Segal,[4] and Cooke,[5] are available. Barach treated patients who were not adequately controlled by prednisone, with the same dose of ARISTOCORT with significant improvement.

Dosage and course of therapy

The initial suppressive dose range recommended is 10-14 mg. daily. Frequently, there is a prompt decrease in cyanosis and dyspnea, with increase in vital capacity.

The average maintenance dose level was 8 mg. a day. If it is desired to maintain a patient on continuous therapy for some months, dosages as low as 2 mg. a day have been successful. All decreases in dosage should be gradual and at a rate of 2 mg. decrements in total daily amount, every two to four days. The daily dosage is divided into four parts and given with meals and at bedtime.



in Neoplastic Diseases

◊ *Forty-four children and adults have been given* ARISTOCORT *for palliative treatment of acute leukemia, chronic lymphatic leukemia, lymphosarcoma, lympholeukosarcoma and Hodgkin's disease.*

Results of treatment

Farber[6] has treated 22 children with acute leukemia for an average of three weeks. Of the 17 observed long enough to judge the efficacy of the medication, he rated five as excellent, three as good, two as fair and seven as poor responses.

Hellman and associates[7] gave ARISTOCORT to a group of patients with the various lymphomas in doses of 40 to 50 mg. a day—occasionally up to 100 milligrams. Treatment was continued in some cases for 17 weeks. Response was classified as good for the palliative purposes for which the drug was given.

Dosage and course of therapy

Massive initial suppressive doses of 40 to 50 mg. per day in children (1 mg./kg./day) and up to 100 mg. a day in adults have been administered.

Responses to any specific dosage in these conditions vary so widely that only a general dosage range can be indicated. Treatment must be individualized; rate of reduction in dosage and determination of maintenance levels cannot be categorized.

Miscellaneous

Patients with various other diseases have been treated by several clinical investigators. These include patients with osteoarthritis, acute bursitis, rheumatic fever, spondylitis, other "collagen-vascular" diseases (dermatomyositis, etc.), thrombocytopenic purpura, chronic eosinophilia, hemolytic anemia, diuretic-resistant congestive heart failures, and adrenogenital syndrome.

There have not been sufficient patients in any of the above categories to permit definitive treatment schedules to be finally established for ARISTOCORT. Additional studies are now in progress and physicians desiring information on any of these diseases are requested to write to Lederle Laboratories, Pearl River, New York for available data.

ARISTOCORT is available in 2 mg. scored tablets (pink); 4 mg. scored tablets (white). Bottles of 30.

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The Promise of Aristocort

in Inflammatory and Allergic Skin Diseases

◊ *Over 200 patients with allergic and inflammatory skin diseases (including psoriasis, atopic dermatitis, exfoliative dermatitis, pemphigus, dermatitis herpetiformis, eczematoid dermatitis, contact dermatitis and angioneurotic edema) have been treated continuously with* ARISTOCORT *for periods of up to eight months.*

Results of treatment

Rein and associates[1] treated 26 patients with severe dermatitis. Twenty-four had been on prednisone when changed to ARISTOCORT. While some had found satisfactory symptomatic relief, others had also developed side effects—moon face, buffalo hump, increased appetite with excessive weight increases and gastro-intestinal disturbances.

These investigators determined the equivalent dosage of ARISTOCORT to be approximately two-thirds that required to control symptoms on the previous corticosteroid. Thirteen of the 26, who had developed moon face, noted either an actual decrease or no further increase when transferred to ARISTOCORT. In addition: *Voracious appetites disappeared, with loss of weight in 11 patients; there was no elevation in blood pressure, and no necessity to restrict sodium or administer supplemental potassium.* Sherwood and Cooke,[2] and Shelley and Pillsbury[3] obtained similar results in allied disorders.

Hollander[4] first observed that ARISTOCORT appears to have striking affinity for the skin and great activity in controlling such diseases as psoriasis, for which other corticosteroids have been indifferently effective. Shelley and Pillsbury,[3] in 50 cases of acute extending psoriasis found that over 60 per cent were markedly improved.

Dosage and course of therapy

The recommended initial suppressive dose range is 14 to 20 mg. per day. In very severe cases, temporary dosages up to 32 mg. a day have been successfully employed. Once lesions are suppressed, gradually reduce dose to the maintenance level—which may be as low as 2 mg. per day.

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in Disseminated Lupus Erythematosus

◊ *Forty patients with disseminated lupus erythematosus were treated with* ARISTOCORT *for continuous periods of up to nine months.*

Results of treatment

Patients have responded very promisingly to therapy. Dubois[1] has had the largest single experience (28 cases) with ARISTOCORT in the treatment of this disease. He reported 25 of the 28 responded favorably.

Freyberg,[2] Hartung,[3] Hollander,[4] Spies,[5] and Segal,[6] each in smaller series of cases, reported similarly good therapeutic responses.

Dosage and course of therapy

The initial suppressive dose recommended is 20-30 mg. daily. Once the desired effect is achieved, the dose should be reduced gradually to maintenance levels (3 to 18 mg. per day).

In severely ill patients large doses may be required for several days in order to preserve life. Even on these large doses, edema and sodium retention have not occurred.

ARISTOCORT is available in 2 mg. scored tablets (pink); 4 mg. scored tablets (white). Bottles of 30.

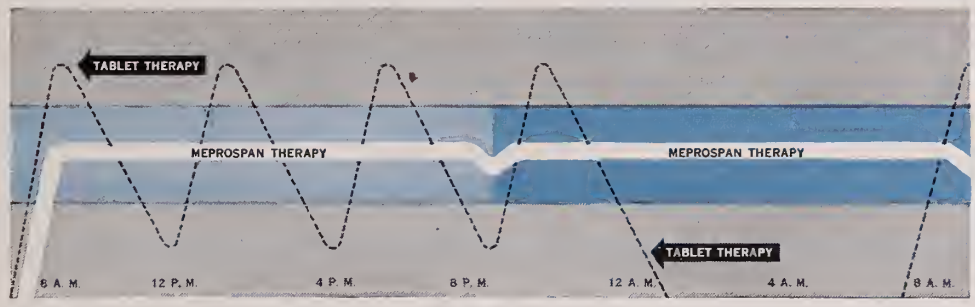
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References: 1. Spies, T. D., et al.: J.A.M.A. 159:645, 1955. 2. Spies, T. D., et al.: Postgrad. Med. 17:1, 1955. 3. Gelli, G., and Della Santa, L.: Minerva Pediat. 7:1456, 1955. 4. Guerra, F.: Fed. Proc. 12:326, 1953. 5. Busse, E. A.: Clin. Med. 2:1105, 1955. 6. Sticker, R. B.: Panel Discussion, Ohio State M. J. 52:1037, 1956.

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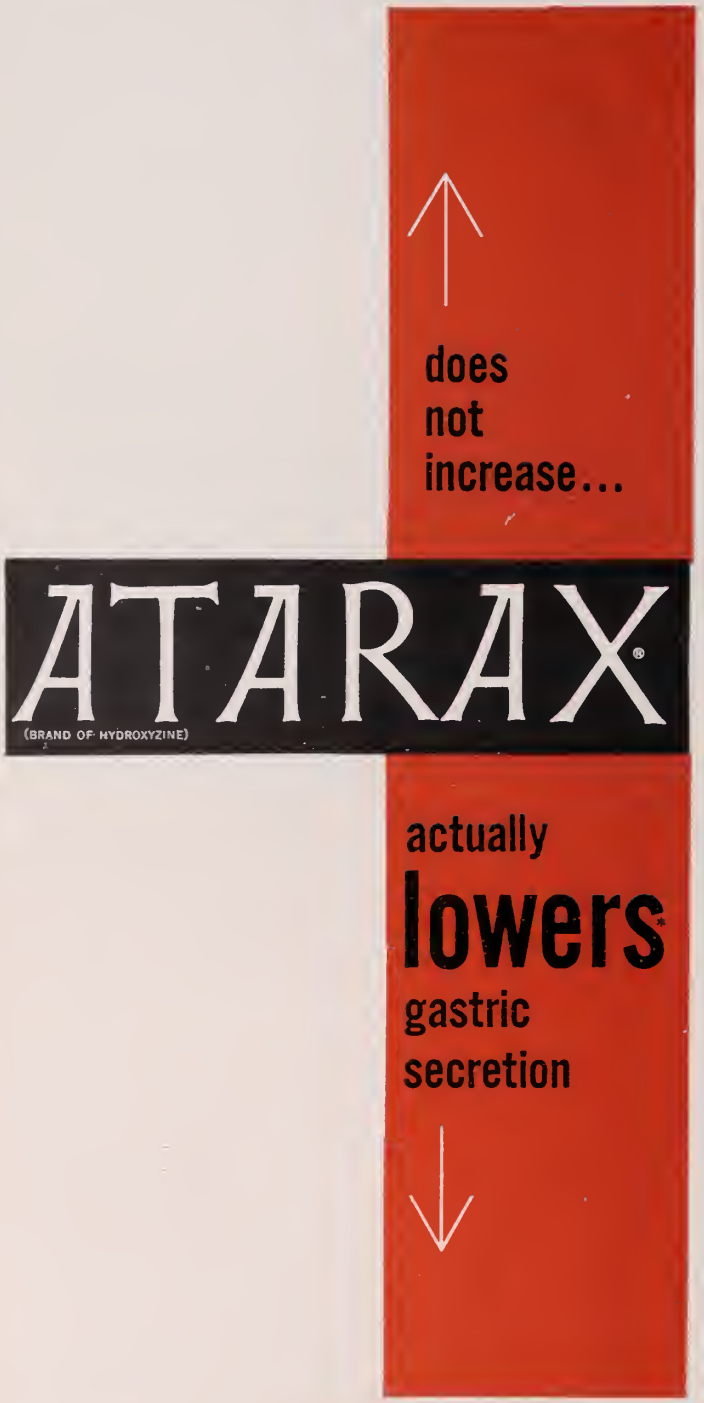
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references: 1. Strub, I. H.: Personal communication. 2. Ayd, F. J., Jr.: presented at Ohio Assembly of General Practice, 7th Annual Scientific Assembly, Columbus, September 18-19, 1957.

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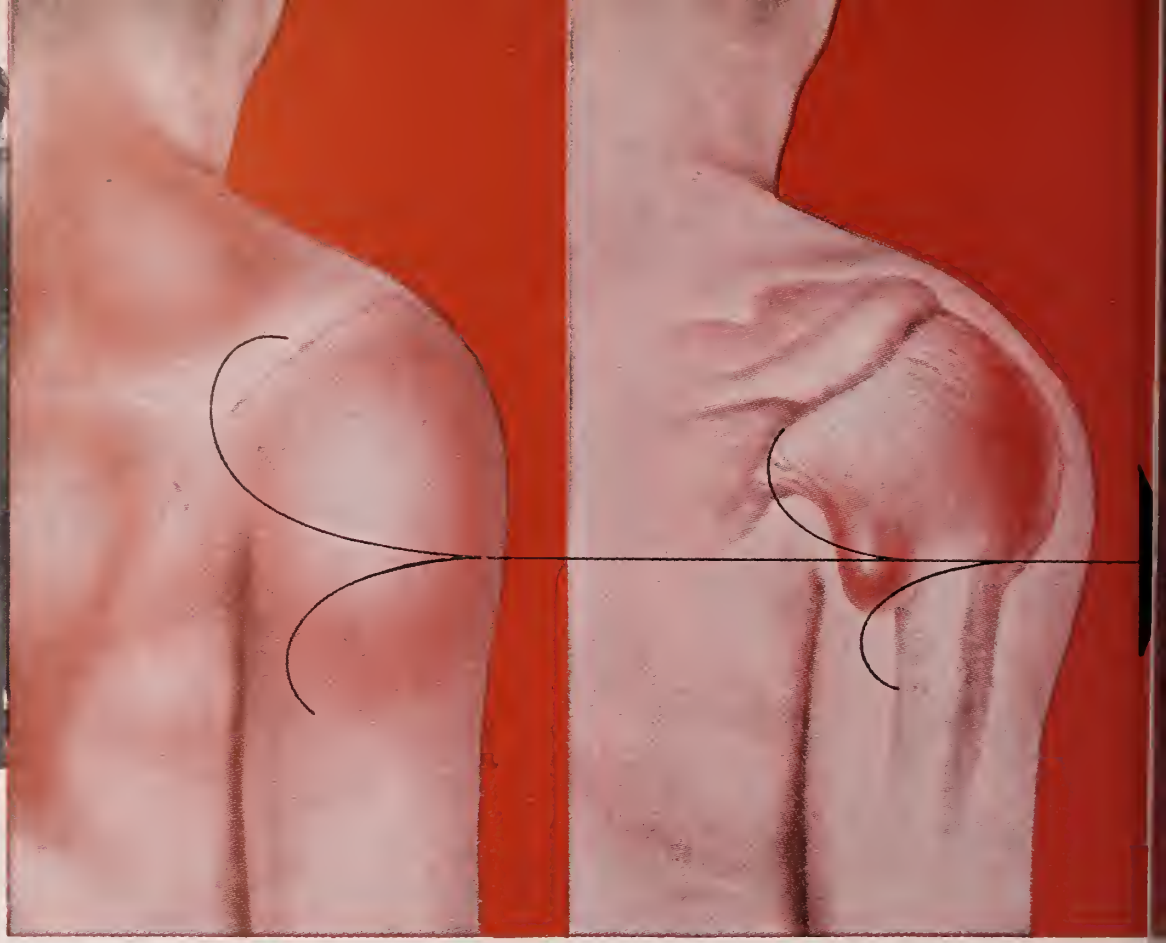
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1. Comroe's Arthritis: Hollander, J. L., p. 149 (Fifth Edition, Lea & Febiger, Philadelphia, Pa. 1953).
2. Merck Manual: Lyght, C. E., p. 1102 (Ninth Edition, Merck & Co., Inc., Rahway, N. J. 1956).

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[1] Nichols, R. L. and Finland, M.: J. Clin. Med. 49:410, 1957.

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1. Levy, S., *JAMA.*, 153:1260, 1953
2. Thompson, L., Procter R., *North Carolina M. J.*, 15:596, 1954
3. Thompson, L., Procter, R., *Clin. Med.*, 3:325, 1956



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References: 1. Groskloss, H. H., et al: Clin. Med. 2:885 (Sept.) 1955. 2. Goldsmith, J. W.: Minnesota Med. 40:99 (Feb.) 1957.

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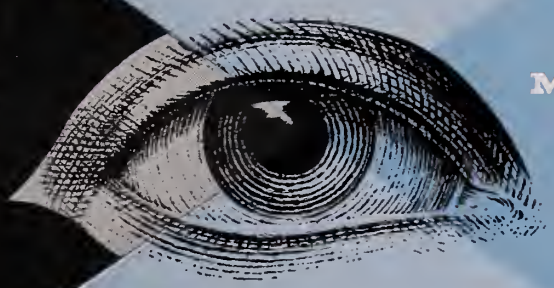
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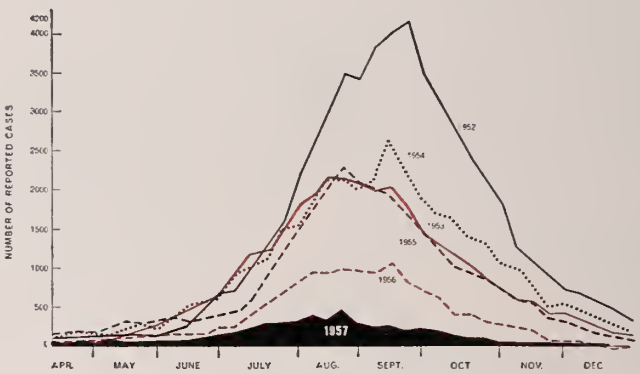
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(data compiled from U.S.P.H.S. reports)

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1. J. A. M. A., 165:*21 (November 23), 1957.*

2. Department of Health, Education, and Welfare: News Release, October 10, 1957.



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The Virginia
MEDICAL
MONTHLY

April, 1958
Vol. 85, No. 4
Whole No. 1271

Guest Editorial . . . .

Ano-Rectal Abscesses

WHEN ONE CONSIDERS the vulnerable anatomy of the anus and rectum and the trauma to which it is subjected by defecation with pathogenic bacteria ever present, it is not surprising that infections are responsible for many complaints referable to this area. It is generally agreed that the delicate anal crypts and ducts surrounding the juncture of the anus and rectum are the chief portals of entry for bacterial invasion, from which the infection penetrates adjacent tissues and spaces.

While the late diagnosis of abscess is easily made by history and superficial examination, early diagnosis may be extremely difficult at times. The treatment of abscess is immediate, adequate surgical drainage which very often involves incision through overlying normal tissues. Delay in reaching the diagnosis or in the establishment of drainage, while waiting for the suppurating process to reach the skin or to "point", means unnecessary suffering, prolonged illness, and economic loss to the patient as well as increased tissue destruction and ultimately a greater scarring and deformity.

The volume of pus and the tension within undrained abscesses will steadily increase, forcing the infectious material to break through natural barriers separating tissue planes and spaces. This means that the fistulous sequel to such a complicated abscess will in turn tend to be complicated and more difficult of cure. Since the symptoms and signs of abscess are very largely the result of tension within the abscess, it can readily be understood why the small intrasphincteric abscess often containing only a few drops of pus, tightly confined within the powerful, space-restricting sphincter muscles will produce severe pain and other symptoms so much faster than much larger abscesses involving the more spacious ischio-anal or pelvi-rectal spaces. In only intrasphincteric abscesses is defecation painful.

A careful history of onset is helpful in diagnosis and suppuration should be suspected in all progressively painful swellings of seventy-two hours duration. Complaints of a feeling of fullness or weight in the rectal areas made worse by coughing or jarring the body, as in missing one's step, suggest the possibility of abscess. Such patients should be kept under extremely close observation until the diagnosis is proven, for physical findings can change rapidly as pus collects. The presence of pus can be proven by needle aspiration of a few drops of pus under local anesthesia.

In establishment of drainage, the center of the abscess is first located by careful palpation and incision made directly into it, radial to the anus, and using caution to prevent injury to the sphincter muscles. Incisions should be of sufficient length to

provide adequate drainage; and some degree of saucerization will assist in maintaining it.

Drains are not used as these so often actually block drainage. Ischioanal and retrorectal abscesses should generally be drained through the perineum; supralevator abscesses may on occasion be drained either through the rectal wall or through the perineum, but under no circumstances through both.

Antibiotics have little if any place in the treatment of pararectal abscesses, and their use is frequently responsible for delay in diagnosis and the development of complications. In many cases drainage can be satisfactorily achieved under local anesthesia in the office, at which time the patient is informed that such abscesses are usually followed by fistula, requiring excision after a period of drainage. Inaccessible abscesses should be hospitalized and drained under general or regional anesthesia, removing offending anal crypts and fistulous connections at the same time.

Robert V. Terrell, M.D.

Editor's Note: Dr. Terrell is Assistant Professor of Clinical Proctology of the Medical College of Virginia.

SONNET POST-OP.

Ah, Soul of mine, which can't produce of Art
The faintest trace without its toll of pain,
The expiring breath, which tears me quite apart
Does often leave behind a tell-tale stain.
Whilst I was dreaming deep they did you wrong,
Tore off your garland gay of purple grapes,
Bound you tight with many a chromic thong
And filled you full of yards of gauzey tapes.
Now inarticulate, ah Soul, you lie,
Dumb but not, unfortunately, numb.
When can you raise your voice above a sigh,
A sound of Art? When will that glad day come
When I no longer have to merely sit
But can cut loose, praise God, and relish it?

—Cuthbert Tunstall, M.D.

Whip-Lash Injuries of the Cervical Spine

JOHN S. THIEMEYER, Jr., M.D.
GEORGE A. DUNCAN, M.D.
GEORGE G. HOLLINS, Jr., M.D.
Norfolk, Virginia

WHIP-LASH INJURY may be considered the modern day successor to the so called "Railroad Spine" of the early 1900's for, like its predecessor, it is closely linked to the litigation aspect of medicine, it is the result of an acceleration-deceleration force, and it sorely taxes the ability of the physician to differentiate the organic pathology from the functional complaints. A group of 123 successive neck injuries, of such severity that x-rays were required, were taken from our files for the year 1956 and the whip-lash injuries of that group are herewith presented as regards the pathology present, objective and subjective findings, relationship to medical-legal aspects and response following settlement of claim and treatment. It is to be noted that all of our whip-lash injuries were x-rayed, for it was found that over 95 per cent had medical-legal or insurance compensation linkage, and unequivocal investigation was required. Occasionally, however, the syndrome was seen when there was no litigation linkage and it is interesting to here note that the syndrome assumed the identical form in the non-litigation patient as in the patient with litigation pending.

This syndrome always developed after a "whip-lash" type of trauma or rapid acceleration and deceleration. The trauma was usually followed by a "dazed sensation" or "nervousness" immediately after the accident and then progressive neck pain beginning immediately after the accident or not until the next day. This pain increased in severity and was associated with headaches, nervousness, often difficulty in swallowing, blurred vision, and occasionally radiation of pain into the arms, ears or interscapula regions.

William L. Allen defines whip-lash injury as follows: "A Whip-lash injury is the damage sustained by the neck structures when the body propulsion comes to a sudden stop or when the body is suddenly propelled and the head is thrust forceably forward, backward or to either side." The head becomes the tail of a "crack the whip" motion. The various forces that may be transmitted to the neck in whip-lash injuries consist of compression, distention, bending, shearing and torsion. When the forward motion of the body suddenly stops (together with the carrier) the head, owing to its momentum, continues forward and produces abnormal thrust to the neck (Fig. 1).

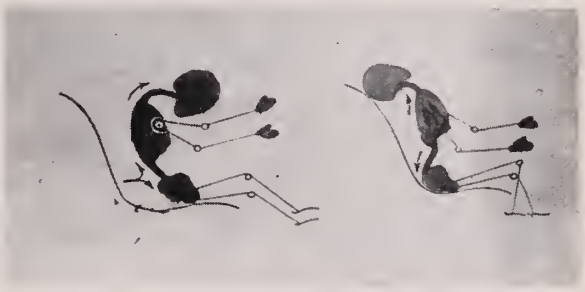


Figure 1

If the body, together with the carrier, is suddenly accelerated in forward propulsion as in rear-end collision, the head, owing to its inertia, is whipped backward in relation to the body, producing an abnormal backward thrust to the neck. In addition, the head may then swing on the neck in rebound in the opposite direction to represent the lash complement of the whip-lash. If the head and neck are turned at the time, abnormal torsion forces will be transmitted to the neck.

Injuries that can be sustained to the neck by this mechanism are: (1) compression fracture of one or more cervical vertebra with varying degrees of loss of height; (2) compression damage and multiple ruptures of the internal hydraulic structure of one or more of the intervertebral discs, with loss of height resulting in altered mechanical alignment of the cervical spine; (3) compression, which may cause damage to the lips or margins of the vertebral bodies; frequently the margin is mashed outward to resemble a long-standing spur; (4) shearing and bending force with fracture of the odontoid process; (5) distention and torsion and bending force avulsion of posterior portion of the facet joint ligaments with (a) forward subluxation of one or both sides of one

Presented at annual meeting of The Medical Society of Virginia, Washington, D. C., October 27-30, 1957.

or more vertebra on the adjacent underlying vertebra, and (b) dislocation of one or both sides of one or more vertebra on the adjacent underlying vetebra: (6) shearing, bending and compression fractures of the lamina or facets; (7) distention force avulsion of the spinous processes.

Fortunately, the majority of the whip-lash injuries are limited to a tearing of the musculature of the neck and of the ligaments about the facets or intervertebral joints. Fortunately, too, these injuries are most often minor and usually respond to conservative therapy. However, it must be again emphasized that considerable damage can occur and even though immediate x-ray findings may show very little: changes such as bone spurs, arthritic degeneration, narrowing of the vertebral interspaces, or subluxation may appear as much as a year or two later. It can certainly be said that an x-ray which reveals flattening of the normal curve of the cervical spine or limited motion in flexion and extension is at least a suspicious x-ray and further investigative studies and a cautious prognosis should be made. Further, x-rays which show hemorrhage in the retro-pharyngeal area may, too, have a sinister connotation. Therefore, after any severe injury to the neck, routine views of the cervical spine should be secured as soon as possible, and special views as indicated.

If there is any indication of swelling of the retro-pharyngeal soft tissues, a repeat lateral view in 24 hours is also indicated. If swelling is transient, it is assumed the swelling is edema. If it persists, hemorrhage must be considered. Absence of swelling of the retro-pharyngeal soft tissues may be an aid in determining whether an injury to the cervical spine is recent or old. Bisner and Leask have stated that retro-pharyngeal soft tissue swelling is associated with 25 per cent of all whip-lash injuries and is an index to the degree of trauma and thus important in estimating the prognosis.

In reviewing our figures, it was seen that of the total 68 cases of whip-lash injury only 3 were not medical-legal or insurance compensation cases. It is therefore interesting to review some of the findings of Nicholas Goten in his paper, "A Survey of 100 Cases of Whip-lash Injury After Settlement of Litigation." In this paper he states that 54 per cent had no appreciable trouble relative to their necks nor had they seen a physician for a year after settlement of their claims. Thirty four per cent had minor discomforts on cloudy days and pain on doing unusual exercises and noticed slightly more frequent headaches. These statistics were gathered on an unbiased written questionnaire which is no way obligated the individual. They also noted that patients of 60 years or older were much slower in recovery and all had residual changes possibly related to arthritis. This seemed to be our finding also. They felt that the greatest recovery was noted in the first year. In their series, 30 per cent of the whip-lash injuries required hospitalization. Eighty-five per cent of their cases developed some psychosomatic symptoms and 12 per cent, despite settlement of claims, had some trouble which required them either to wear a brace, sleep in traction or take physiotherapy periodically.

In the series here presented of 123 successive cases, half, or 68 were whip-lash injuries. The other 55 cases consisted of arthritis of the cervical spine, ruptured intervertebral discs, or other pathology not incurred in a true whip-lash type of injury. It is noted that 46 of the patients were women and 22 were men, a ratio of 2 to 1. The average age for the group was 38.8 years; the oldest patient was 74 and the youngest patient was 2 years of age. On reviewing the literature it was found that no mention was made of a child being seen with this type of injury and it is concluded that a child usually is protected by the back of the seat of the car at impact, or it may be that his tissues are much more elastic and less vulnerable to tear with this type of force. The 2 year old child here presented suffered a typical whip-lash injury. His x-rays were negative. He responded well to rest and no residual was noted.

In this series it was found that of all the patients that could be accurately followed, none returned following settlement of their claim or completion of the litigation. The type of trauma received was almost entirely that of being a passenger in a car which was struck from behind. There was one patient who slipped on a wet sidewalk with an acceleration-deceleration type of injury. There were a few cases in which the car was struck from the side but on questioning the patient, the whip-lash type of force occurred. Physical findings ranged from no objective findings to marked spasm, rigidity, tenderness and limited range of motion of the neck in all or some planes, tenderness of the muscles controlling swallowing, swelling of the muscles involved, limited range of motion of the shoulders and arms. The symptoms as previously mentioned varied from those of transient headache and neck stiffness to persistent frontal headache and often the headache was described as passing over the dome of the skull,

persistent pain of the posterior neck running over the fibers of the trapezii and down the dorsal spine, pain on any motion of the neck, nausea, vomiting, blurring of vision or a dazed sensation, pain on swallowing and extreme nervousness. The majority of x-rays revealed no evidence of orthopaedic pathology. However, there was noted slight to considerable flattening of the normal cervical curve, some associated arthritic changes, subluxation of the vertebrae (usually in the mid cervical region around C 3 & 4), some retropharyngeal thickening, and osteophytosis.

One can readily realize the extreme difficulty of differentiating the symptoms of a pure whip-lash injury from those present in a person who had a pre-existing osteoarthritis with trauma superimposed. As was previously stated, inevitably in this type of patient, the symptoms were much more severe than in those with normal appearing spines and they lasted for a much longer period of time.

As to treatment, this varied from local heat and sedation, to head halter traction and hot packs and massage, physiotherapy or traction and hot packs at home, massage of the muscles, plastic Thomas collar, medcolator stimulator, novocain injections, muscle relaxant drugs, webbing shoulder brace, tranquilizing drugs, consultation with a psychiatrist and hospitalization. Most often a collar was of great value for those who persisted in complaint of neck pain. Figure 2 shows the type of collar which we



Figure 2

most often use. The component parts consist of a half inch thick felt strip which is cut to conform to the contour of the shoulder and neck and a strip of stockinette with a hole at one end through which the opposite end will be passed. The collar contours to the neck and shoulders offering a good high and fairly rigid support.

Obviously, if the whip-lash force can be avoided, the injury will not occur. Rarely, but occasionally, one can anticipate a collision and should this situation arise, it is advisable that the passenger slide down in the seat of the car so that his head is braced by the back of the seat. (Fig. 3).



Figure 3

In summary, we have presented here 68 cases of whip-lash injury ranging in age from 2 to 74 years. This represents 50 per cent of persons with severe neck complaints seen in our office during 1956. It is a very common injury and one which, we believe, is being seen more frequently each year. In reviewing these cases, it is seen that none of them returned following settlement of the litigation. We believe however, that this is not the entire story. Some of these patients learned to live with their complaints, or are not complainers and do not return to see the doctor with minor neck or shoulder pain, while others find that after several years their complaints have not eased and further examinations will reveal arthritis, subluxations, or even ruptured discs.

One must remember, that even though the x-rays may be negative and there may be few physical findings, and even though there seems to be a large element of "nervousness", the pain these patients experience is usually real and often defies the resourcefulness of the attending physician to relieve it. On the other hand, these figures prove that these patients almost always fully recover. To over-treat them introduces an iatrogenic effect which interferes with the patient's recovery and return to a normal, useful life and must thus be condemned.

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Staphylococcic Infections

Two suggestions for combating the growing problem of staphylococcic infections in hospitals have resulted from a recent American Medical Association conference.

Reported in the March 8th Journal of the A.M.A. the suggestions are:

—That every hospital appoint a responsible officer or committee to investigate infection in hospitals and attempt to control it by instituting preventive procedures.

—That more scientific research concerning staphylococci be encouraged. "Diligent research" is needed to understand the special properties that make the bacteria so dangerous and to find measures against them.

The conference on staphylococcic infections, sponsored by the A.M.A. Board of Trustees, was attended by representatives of major medical groups. The A.M.A. board passed the conference recommendations on to the Joint Commission on Accreditation of Hospitals for its consideration and action. Seven reports of the conference appear in the current Journal.

Two general contributing causes of this serious situation can be discerned. They are:

"A tendency to relax the rigorous aseptic precautions in hospital 'housekeeping' and procedure, relying overmuch on antibiotics to suppress infections."

"The very peculiar biologic characteristics of the epidemic strain or strains, including their special propensity for becoming resistant to an increasingly wide range of antibiotics and chemotherapeutic agents."

Dr. Stuart Mudd, Philadelphia, chairman of the A.M.A. committee on research, said complications due to staphylococcic infections are "currently bedeviling" hospital staffs in all medically advanced parts of the world. Appearing throughout the world is "a strain or strains" of Micrococcus (Staphylococcus) pyogenes var. aureus with "very special biologic characteristics." These strains cause skin abscesses, wound infections, pneumonia, and other complications in hospitalized persons.

An accompanying Journal editorial warned "that aseptic techniques should never be relaxed for a moment in spite of the convenient availability of antibiotics. The modes of transmission of staphylococci are varied and complex and the organisms are practically ubiquitous."

In addition to asepsis in the operating room and nursery, many hospital housekeeping details must be considered, the editorial said. According to one report in the Journal, these range from the ink pad used in the delivery room to record the footprints of infants to handwashing, "possibly the most important single control measure."

The editorial also said, "Fortunately a few antibiotics are still effective against staphylococci. How long they will remain so will depend on the wisdom and restraint with which they are used."

Integration of Sedatives and Tranquilizers With Psychotherapy

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IN CONSIDERING my thoughts on this subject, I found it difficult to discuss the integration of two forms of therapy without discussing each separately, if briefly, then proceeding to consideration of the ways in which they may or may not be profitably integrated.

Other speakers preceding me have already spoken of the nature of anxiety, its clinical manifestations in neurotic and psychophysiologic disorders, and something of the approach to diagnosis and management. Presumably, no symposium on this subject would be complete without at least some passing reference to the use of drugs, particularly the popular tranquilizer. However, you will note from the title that this is not to be a paper on tranquilizers, or even on the pharmacological approach to the treatment of emotional disorders. Rather, it is implicit in the title that psychotherapy is *the* treatment, and that sedatives and tranquilizers may be integrated with it. This is exactly my position.

At the risk of some repetitiveness, I should like to re-state the case for psychotherapy, at least for my own benefit and for purposes of logical discussion.

In my opinion, psychotherapy is essentially a learning process, fostered by the inter-personal relationship between the patient and the therapist, with the goal of more effective living. The factors in this definition are the patient, the therapist, the therapeutic process, and the goal. The patient is a person suffering discomfort and/or impairment of functioning, usually because of pathological anxiety, which, in turn, is the result of pathological conflict or mal-adaptation. Anxiety may be manifested in many ways, i.e., psychosomatic symptoms, personality disorder, behavioral disturbances, or simply felt as anxiety, fear, or nervousness. Anxiety, then, or the various crippling defenses erected against it, is the subject of our concern. It is what makes the person a patient or potential patient, for the purposes of this discussion. The therapist is, in this case, the doctor who enters into an interpersonal therapeutic relationship with the patient for the purpose of furthering the therapeutic process toward the desired goal. I have said that the ultimate goal is more effective living, which implies better health, physical and emotional, better functioning as an individual and member of society, and reasonable freedom from discomfort.

Therapy is most often directed at relieving pathologic anxiety, and thereby reducing the need for defensive maneuvers, which we call neuroses and psychoses of various types. This is what the patient is seeking, and what motivates him to assume the patient role, i.e., relief of symptoms. He, of course, wants this in the quickest, easiest, and cheapest way possible and he assumes that the doctor can give it to him in the conventional ways he has come to expect from experience with other pain or illness. A pill or shot, a prescription, a treatment of which he is the passive recipient—hence, the tremendous demand for tranquilizers. The doctor, acting in his customary role, is also looking for some such agent —a simple, quick, easy, and cheap cure.

We must go back to the nature of the disease process giving rise to the symptoms, its etiology, the methods of treatment, the nature of a cure, and the goals of treatment. This we do in considering any other disease and its treatment. We are forced to admit that the disease is complex, its causes often obscure, the definitive treatment apt to be long and arduous, and even the goals unclear. In many cases, the prognosis is unpredictable, or poor. Furthermore, the whole business is surrounded by a pall of resistance and prejudice from the patient, family, community, and even in the therapist.

If we agree that psychotherapy is the definitive treatment, the one directed at the cause of the disturbance and the one holding some promise of basic change for the better or favorable alteration of the pathologic process—then, what is the role of sedation or tranquilization, Essentially, their function seems to be symptomatic, that of relief of symptoms through reduction of anxiety and dampening of the

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excessive autonomic nervous system activity. This would seem to be desirable, since it fulfills one of the basic tenets of medicine—the relief of suffering. However, there are pitfalls, as everyone knows, in this approach to most problems in medicine. Most obvious is the danger that the patient, and even the doctor, may hopefully mistake this pharmacologically induced reduction in symptoms for genuine improvement. Such unfounded optimism is usually doomed to disappointment and frustration. To be sure, in some cases, the natural reparative processes, the inherent drives toward health do assert themselves during a period of respite from the destructive effects of anxiety and its secondary elaboration. This is more apt to occur in patients of good personality organization, with relatively strong egos—who have suffered some temporarily overwhelming trauma, and who would tend to recovery anyway.

It is this phenomena that perhaps gives us the clue to the most effective utilization of sedatives and tranquilizers in the more severely and persistently disturbed patients with less fortunate personality structure and less favorable environmental circumstances. Ideally, these pharmacological agents should be used judiciously as adjuncts to treatment and not as the treatment itself. They may serve to foster a climate in and around the patient, favorable to the institution and carrying out of truly therapeutic measures. As noted above, psychotherapy is a learning process. Severe anxiety and preoccupation with symptoms impedes learning or any constructive change. On the other hand, some anxiety in the form of alertness, and enough to give motivation, is favorable to learning and necessary to psychotherapy.

It is important, then, that the patient be told the purpose and the limitations of the drugs used as an adjunct to treatment—"This is to make you somewhat more comfortable while we try to get to the bottom of your problem, and work out some solution." This may be particularly valuable and only necessary in the early stages of treatment, while the therapeutic relationship is becoming established. We should never forget that the therapeutic relationship is also tranquilizing and reduces anxiety. Never under-estimate the power of a good doctor-patient relationship, or any inter-personal relationship, for that matter. We are probably much less dependent on pharmacology than we give ourselves credit for. Undoubtedly also, much of the apparent benefit from giving a medication is due to the placebo effect. This has been repeatedly demonstrated in controlled experiments. Not infrequently a patient will discontinue a drug of his own accord, once the therapy is underway.

The current variety of sedatives, tranquilizers, and stimulants available, the butt of many jokes and baffling in their claims, sizes, shapes, and colors, nevertheless does represent an addition to the armamentarium of those of us dealing with neurotic, psychotic, and psychosomatic illnesses. They should be used, if at all, in a flexible and sensitive way, trying to adjust to the needs of different patients, and to the same patient at different stages. They should not be used indiscriminately or unnecessarily, and the goal should always be toward their elimination by substituting the patient's own resources as they are strengthened through the psychotherapeutic process. Of course, there are patients in which we have to settle for less than the ideal; when for many possible reasons, adequate therapy cannot be carried, or in which it simply fails. Just as there is not yet any drug panacea, neither is psychotherapy a cure-all or applicable in every case. We often are forced to compromise and accept the fact that some cases can be handled only with supportive care, and perhaps maintenance of some drug is found most effective in controlling symptoms while carrying the smallest risk.

It is not the purpose of this paper to go into the details of the psychotherapeutic process, or into the details of psychopharmacologic management, but to outline general principles. Both psychotherapy and the use of sedatives are ancient practices in medicine, only re-emphasized now in modern guise. The essential purpose of tranquilizers or ataractics is not different from old-fashioned sedatives, such as bromides, barbiturates, and alcohol. They offer certain refinements in site of action, leaving the cortical functions relatively intact. It is this latter characteristic which makes the ataractics perhaps more valuable for use in conjunction with psychotherapy. However, there is evidence that they do cause some reduction in learning acuity. The ataractics offer some advantages in safety, less tendency to addiction, fewer undesirable side effects, but they also present new problems and are not free of side effects, complications, and contra-indications. For some reason, there seems to be a greater tendency for the public and for physicians to assume that these drugs in themselves offer a cure. The expectations seem to be much greater because they are new, and we are in the age of "miracle drugs".

When we gave bromides or phenobarbital, we usually knew that we were temporizing, stalling for

time, or simply giving a symptomatic drug. The danger with tranquilizers is that we kid ourselves, or the patient, that this is a substitute for treatment, or *is* the treatment of the disorder. We should be clear that it is only for amelioration of symptoms enabling the person to go on with his duties in many cases, and hopefully to work out solutions to his internal and external problems through his own efforts, or through some form of psychotherapy, whether it is called such or not.

There is another group of drugs which are not tranquilizers in the usual sense nor sedatives, but which may be useful in selected cases. These are the amphetamines and similar drugs with a true stimulating action. Dexedrine, benzedrine, desoxyn, metrazol, meratran, ritalin, etc.—these are drugs which are helpful in the depressed, retarded patient, and in some cases by counter-balancing parasympathetic over-activity. They may also be useful in conjunction with tranquilizers such as Thorazine, in overcoming the side-effects of lethargy or somnolence. When sedatives are used to insure a good night's sleep, which, incidentally, is an important point in the management of most cases of anxiety and depression, stimulants may be used with profit in the morning to overcome the hangover effect. Depressed patients, particularly, feel lowest in the mornings, and have a hard time getting started. A stimulant such as ritalin or dexedrine gets them over this hump.

We find that physicians other than psychiatrists tend to use much smaller dosages of tranquilizers than we do, and this may account for some of the failures to achieve desired results. In a very severe anxiety case, for instance, we frequently use chlorpromazine up to 300 or 600 mgm. a day, in doses of 50 to 100 mgm. every four to six hours, and meprobamate, 400 to 800 mgm. three to four times a day.

Occasionally, other combinations of drugs sometimes seem to help when one alone gives unsatisfactory results. Reserpine and chlorpromazine has been reported as effective in resistant cases of schizophrenia.

Individualization of the drug of choice is important, since the effectiveness as well as sensitivity seems to be quite an individual matter. Patients who get little or no relief or even acutely adverse reactions from one preparation may respond dramatically to another, usually of a different chemical class or mode of action.

It is not necessary to go into more detail of this kind, as I am sure you have all had similar experience, and the literature, to say nothing of the drug detail men, are full of this kind of information.

In conclusion, I can sum up my remarks in a one-paragraph quotation from a recent paper by Dr. John Whitehorn, professor of psychiatry at Johns Hopkins:

"In a less mature period of American psychiatry, we witnessed much dispute and rivalry between those who advocated a pharmacological approach, and those who advocated an environmental approach to the management of behavior disturbances. Now, we see in a practical way how these different approaches should not be rivals, but supplements to each other."

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Social Security Footnotes

The government, while slow to acknowledge anything wrong with the Social Security System, underestimated the demand for benefits. Women who could obtain benefits at 62, 63, and 64 decided to do so even if the payments were less than they would be at 65. Farmers suddenly turned out to be older than expected. Some began to pay social security taxes on reported income of $4200 which exceeded their income in prior years. Then they applied for benefits after paying taxes for six quarters. Many people who had retired and were well beyond 65 years of age, dug up jobs for themselves and paid social security taxes for 18 months, thereby qualifying for benefits of from $30 to $108.50 monthly for life. Social security experts in making their cost projections underestimated the ingeniousness of the American people when Federal give-aways are as widely advertised as are social security benefits.

Atherosclerotic Disease of the Abdominal Aorta and Iliac Arteries

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ATHEROSCLEROTIC DISEASE is of great current interest, both to the laity and to the medical profession. It is the usual cause of gangrene of the lower extremities, myocardial infarction, cerebral thrombosis. It is a cause of mesenteric thrombosis and malignant hypertension due to thrombosis of a renal artery. Interest is heightened by the fact that the complications of the disease are rapidly succumbing to medical progress. The relationship of the blood lipids to the process is being unfathomed and drugs are being discovered that will reduce blood lipid concentration. Satisfactory surgical procedures are being or have been developed for the correction of atherosclerotic disease of the abdominal aorta, the iliac and femoral arteries, of the renal arteries, of the carotids, and even of the coronary arteries. The disease will be encountered with increasing frequency in the average physician's practice due to an increased incidence and a larger older population. We will limit ourselves in this paper to stenosis and occlusion of the abdominal aorta and iliac vessels.

Leriche, in 1940, first described a group of symptoms associated with complete occlusion of the terminal aorta and aortic bifurcation. The findings described included:

(1) Hip or thigh claudication.
(2) Coldness and ready fatigue of the lower extremities.
(3) Impotence in the male.
(4) Global atrophy of the lower extremities.
(5) Accentuation of pallor of the legs.
(6) Absence of pulsation in all of the arteries of the lower extremities.

For many years, Leriche's syndrome remained the only form of atherosclerotic disease of the abdominal aorta recognized. The profession was slow to realize that Leriche had described a late stage of the disease. We now know that atherosclerotic disease of the abdominal aorta and iliac arteries occurs in a variety of patterns. Whereas, the cardinal symptoms and signs—hip and thigh claudication, leg fatigue, and diminished or absent femoral pulses—are fairly common to all cases, the underlying pathology may vary enormously. We have encountered in our practice the following forms of disease:

(1) Stenotic or partially occluding lesions of the aorta.
(2) Stenotic lesions of the iliac arteries.
(3) Segmental occlusion of the iliac arteries (a limited area of occlusion with a good inflow pattern above and a good runoff pattern below; in other words, a patent pulsatile artery above and a patent nonpulsatile artery below).
(4) Segmental occlusion of the aortic bifurcation and terminal aorta, that is, classic Leriche's syndrome.
(5) Non-segmental or diffuse atherosclerotic disease.
(6) Concomitant aneurysm of the abdominal aorta and iliac artery thrombosis.

Needless to say, the lesions may be long or short, simple or multiple, unilateral or bilateral and may be accompanied by a good or poor peripheral vascular system, i.e., a good or poor runoff or outflow pattern. (Fig. 1, 2).

DIAGNOSIS

The diagnosis of atherosclerotic disease involving the abdominal aorta and iliac arteries is relatively easy and requires no special equipment. The sine qua non is a high index of suspicion and inclusion of palpation of the femoral arteries as well as of the pedal arteries in all physical examinations. Diminished force of femoral artery pulsation is diagnostic of more central arterial stenosis or occlusion. Poor femoral artery pulsation on one side and good pulsation on the other indicates unilateral iliac artery stenosis; absence of femoral artery pulsation on one side and good pulsation on the other is diagnostic of unilateral iliac artery complete occlusion; bilateral absence of femoral artery pulsations indicates complete occlusion of both iliacs, usually accompanied by occlusion of the terminal aorta, that is, classic Leriche's syndrome. Reduced pedal pulses

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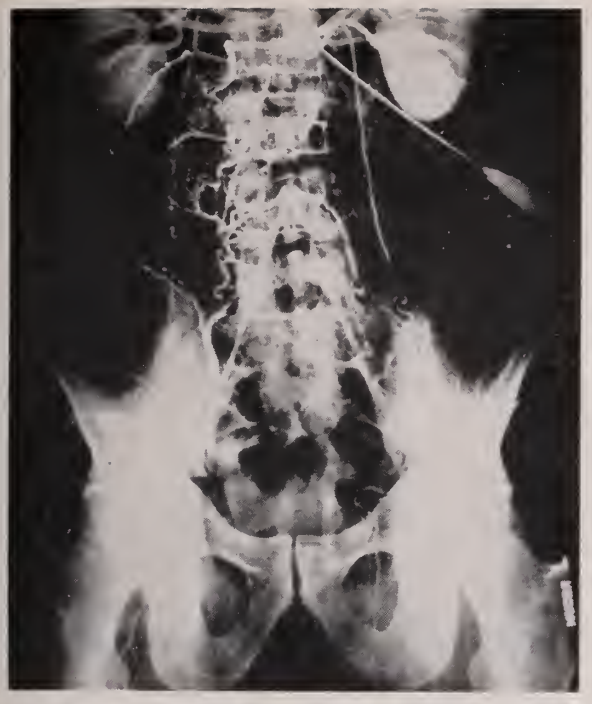


Fig. 1—Typical Leriche's Syndrome: Segmental occlusion of the abdominal aorta.



Fig. 2—Stenotic lesions of the abdominal aorta and segmental occlusion of the right common iliac artery.

and associated calf claudication may be due entirely to aortic or iliac disease, the femoral arteries being relatively normal.

The oscillometer facilitates recognition of all peripheral pulses and is a worthwhile addition to the armamentarium of all physicians interested in the disease. Aortography is not necessary for the diagnosis; however, it assists in classifying the case and is of great value in planning the medical and surgical treatment. It is used routinely by us unless contraindicated by significant cardiac, hepatic or renal disease, short expectancy of life or a known allergy to the contrast media. The literature records a number of incidences of severe complications following trans-lumbar aortography. We have been fortunate in not encountering any of these in our practice. In interpreting aortograms, it is well to realize that the pathology will be found at surgery to be considerably more extensive than indicated by the film.

PATHOGENESIS

The disease is characterized by the deposition of atheromatous material on the intima of the artery. The deposition may be eccentric or circumferential and segmental or diffuse. (Fig. 3). There is a progressive narrowing of the lumen of the artery, progressively reducing the artery's usefulness as a conduit of blood. The lumen of the artery may be compromised up to 70% before the patient begins

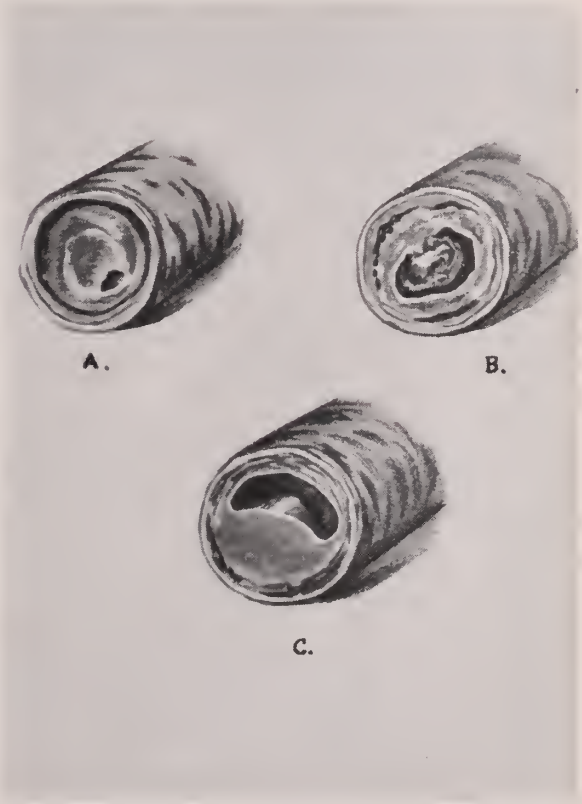


Fig. 3—(A) Annular atherosclerotic narrowing of artery. (B) Superimposed arterial thrombosis. (C) Eccentric atherosclerotic arterial stenosis.

to have symptoms. This is due to the concomitant development of a rich collateral circulation. In most instances, the disease progresses insidiously to partial or complete occlusion of the aorta and iliac arteries with the patient experiencing only minimal symptoms.

The disease has serious implications. It may spread distally to involve the essential peripheral arteries resulting in extremity gangrene, it may extend upward to block the renal arteries and cause death. We have seen patients in the terminal stage of the disease suffer greatly from peripheral ischemic neuritis and even mummification of their lower extremities. There is, moreover, the ever present threat of acute arterial occlusion as result of superimposed arterial thrombosis. The stage is set for arterial thrombosis by many factors.

(1) The rough, ulcerated atheromatous plaque rimming the involved vessel and narrowing its lumen.

(2) The sluggishness of the current of blood through the narrowed zone.

(3) The hyper-coagulability of the blood incident to the hypercholesterolemia.

(4) The reduced pressure of the blood reaching three main arteries below the knee.

(5) The absence of pulsatile blood peripherally.

Thrombosis may occur in the diseased aorta or iliac arteries or in a peripheral artery by reasons stated above. Acute arterial thrombosis complicating chronic atherosclerotic disease may well spell calamity for the patient in terms of loss of limb and life. Even if the patient escapes gangrene, there occurs a degree of ischemia that eventually invalids him.

TREATMENT

In spite of an enormous amount of research, no definite medical treatment has been evolved for this disease. The blood lipid concentration may be reduced by dietary restrictions and by the intake of nicotinic acid or certain nutritional substances containing linoleic acid, vitamin B_6 and vitamin E. There are no evidences that these measures stop the progress of the disease. The systemic vasodilators result in symptomatic improvement in the occasional case. Perennial anti-coagulant therapy offers some promise of lessening the thrombotic complications, and, at present, is the mainstay of our treatment when we feel that surgery is contraindicated.

INDICATIONS FOR SURGERY

The patient presenting the classical symptoms and signs, that is, hip or thigh claudication and diminished or absent femoral artery pulses, should be advised to have surgery. For the symptomatic disease means that somewhere in the abdominal aorta or iliac arteries, 70% or more of the arterial lumen has been comprised. The peripheral arterial circulation is in jeopardy and the stage is set for the complicating acute arterial thrombosis. Surgery is also indicated for small areas of ischemic ulceration or minimal gangrene in the lower extremities secondary to the disease. If direct surgery to improve the circulation is performed prior to surgery for the ulcerated or gangrenous area, many limbs will be saved.

CONTRAINDICATIONS

The surgery of this disease is of considerable magnitude and should not be undertaken lightly. The benefits must be weighed against the danger of the surgery contemplated. A surgical mortality for a disease that may run a slow and unpredictable course is a real disaster. In general, we do not advocate surgery if there are: (1) Evidences of severe pedal ischemia such as rest pain, edema, cyanosis or impending gangrene; (2) Diffuse disease; (3) Multiple occlusions; (4) Poor outflow pattern; (5) Short life expectancy due to cardiovascular or other disease.

SURGICAL PROCEDURES

Aortic and iliac artery thromboendarterectomy, resection and grafting and bypass grafting have become the acceptable surgical procedures for this disease. Thromboendarterectomy is reserved by us for short occlusions in large vessels. It has been a highly satisfactory operation for short iliac lesions. Aortic resection and grafting is rapidly being replaced by bypass graft technique. Resection of the atherosclerotic aorta may be quite formidable due to the accompanying peri-aortic inflammation. Bypass grafts obviate this difficulty, shorten the operative time and have the advantage of preserving collateral circulation. Such grafts can be constructed to bypass almost any aortic or iliac lesion. (Fig. 4).

For classic Leriche's syndrome, we prefer a semi-bypass procedure resecting only sufficient aorta to clear the operative field and performing an end to end anastomosis above and an end to side anastomosis below—to the iliacs or femorals, depending on the extent of the obstruction. By-pass procedures, end to side above the lesion and end to side below the lesion, are preferable for partially occluding lesions. Collaterals are often sparse in such cases and if resection and grafting is performed and the

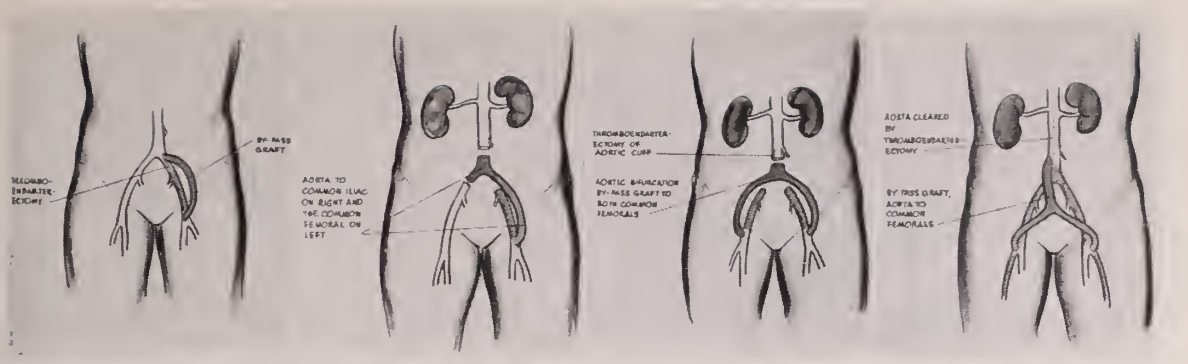


Fig. 4—Commonly used by-pass graft patterns.

graft becomes occluded, the patient may lose the affected or even the unaffected extremity.

A most satisfactory procedure for aorta-iliac artery occlusions is a graft from the aorta to common femorals rather than to the external iliacs. Performing the lower anastomoses at the readily accessible groin sites, rather than deep in the pelvis, has many advantages.

RESULTS OF SURGERY

The results of direct surgery in the form of thromboendarterectomy or arterial grafts for aortic and iliac atherosclerotic disease are relatively good. They are far better than are the results of such surgery for femoral artery occlusions in the thigh. There are fewer initial failures and considerably fewer late graft occlusions. These better results are probably due to the larger size of the vessels and the vigorous flow of blood from above from the aorta. The most important consideration is the outflow pattern. If this is inadequate, thrombosis may occur below the graft or in the graft itself.

During the past 3 years we have performed surgery on 24 patients for atherosclerotic disease of the aorta and iliac arteries. Our mortality numbers 3 cases, our morbidity 2 cases. The three patients died in the early post-operative period. In the first case, a homologous graft was placed from the abdominal aorta to the right popliteal artery and the left common femoral artery. Gangrene of the left leg developed due to an unrecognized additional atherosclerotic area of occlusion in the left thigh. To make matters worse, secondary hemorrhage occurred on the right side from infection of the graft. Amputation of the right leg was contemplated when the patient expired in uremic coma. The second patient died of ascending thrombosis beginning in the right iliac limb of a nylon bifurcation graft which we had placed between the abdominal aorta and the common femorals. The thrombosis was initiated by a kinking of the graft in the pelvis.

The third patient died 48 hours after surgery, presumably from post-operative shock. Autopsy was not obtainable. Surgery in this case was performed as a last resort at the request of the patient and her family but was surely ill-advised. The patient was 73 years of age. She was suffering intolerable pain in the lower extremities from ischemia. The surgical procedure consisted of grafting from the upper abdominal aorta to the femoral profunda artery of each leg. The superficial femoral arteries were thrombosed.

Two patients lost each a lower limb in the early post-operative period due to peripheral arterial thrombosis. Both of these patients obtained restoration of pulses in the remaining leg. They lead relatively normal lives and are considered improved.

Twenty patients in this series are considered improved. They work or otherwise lead normal lives. Their cardinal complaint, claudication, has been relieved. There seems to be a general improvement in their health. The patients seem to be living longer and having fewer cardiovascular complications than might be expected from the nature of their disease. This may be due to the fact that most of the patients in this series have been kept on perennial anticoagulant therapy. Late manifestations of extremity ischemia have not occurred. Somewhat over 50% of the patients have obtained restoration of pedal pulses.

SUMMARY

Atherosclerotic disease of the abdominal aorta and iliac arteries may manifest itself as: (1) Partial stenosis of the aorta or iliac arteries; (2) Segmental occlusion of the iliac vessels; (3) Classic Leriche's syndrome. Palpation of the femoral arteries as well as of the pedal arteries should be included in all physical examinations. Diminished force of femoral

artery pulsation is diagnostic of more central arterial narrowing or occlusion (of the aorta or of the iliac vessels) due to atherosclerotic disease. The patient presenting the classical symptoms and signs, that is, hip or thigh claudication and diminished or absent femoral artery pulses, should be advised to have surgery, for the symptomatic disease means that 70% or more of the arterial lumen has been compromised.

Modern surgery has much to offer for atherosclerotic disease of the abdominal aorta and iliac arteries. Surgery may prevent the peripheral and cephalic spread of the disease, remove stenotic lesions before thrombosis occurs, prevent pedal gangrene and, most important to the patient, relieve the principal symptom of the disease, claudication.

A 24 case series is presented.

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Heredity Counselors

The chances of children inheriting certain physical and mental defects can often be predicted.

In recent years more than 15 little-known "heredity counseling" clinics connected with medical centers or universities have quietly sprung up in the United States and Canada. The counseling is done by geneticists-scientists trained in human heredity.

The work of these centers is described by a New York writer, Jack Harrison Pollack, in the March Today's Health, the American Medical Association's health magazine.

Parents generally visit a heredity clinic after the birth of a defective child, but others also go to the clinics because a relative has a defect.

"The heredity counselor—who deals in facts, not fears—estimates the risks of a couple's future babies being born abnormal. It isn't wild, hit-or-miss guesswork.

"Before any predictions are made, a family tree is carefully investigated. Advice-seekers often receive complete physical examinations. . . . A heredity counselor may also probe hospital records, search old family Bibles, and church records, and, occasionally, even drive hundreds of miles to interview distant relatives."

After evaluating all the facts, the counselor outlines the mathematical probability of a couple's inheriting certain abnormalities, Pollack said. "Naturally no mere mortal can predict nature's handiwork with absolute certainty. Yet risks for malformation recurrences in families can frequently be estimated, even when an inheritance pattern is unclear."

The counselors never advise a couple about whether or not to have children. "Guiding instead of deciding," they merely try to clarify the couple's thinking by telling them the scientific likelihood of specific traits appearing in their unborn children so that they can make their own intelligent decision about having children.

Dr. Sheldon Feed, director of the University of Minnesota Dight Institute and a leading heredity counselor, was quoted as saying, "What is an acceptable risk for one family may not be for another. Many factors have to be considered, such as religious principles, guilt feelings, and whether the parents already have normal children."

Risks vary from 50 per cent down to practically zero, but they are usually much less than parents had feared, the article said.

Not only do the clinics give information about malformations, but also about hair, skin and eye color, multiple births, and susceptibility to such diseases as diabetes and schizophrenia.

Clinics are operating in Berkeley, Calif.; Chicago; New Orleans, Bethesda and Baltimore, Md.; Ann Arbor and Lansing, Mich.; Minneapolis; New York City; Winston-Salem, N.C.; Columbus, Ohio; Austin, Texas; Salt Lake City; Richmond, Va., and Montreal and Toronto, Canada.

Mecamylamine-Reserpine

Results of Treatment in Severe Hypertension

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ALLAN M. UNGER, M.D.
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SINCE THE INTRODUCTION of the autonomic blocking agents for use in the treatment of hypertension, considerable interest in these drugs has followed. The blocking agents, hexamethonium, pentapyrrolidinium and chlorisondamine are quarternary ammonium salts which have uncertain gastrointestinal absorption.[1,2,3,4] Mecamylamine* (Inversine) has similar action but is a secondary amine and is absorbed completely from the gastrointestinal tract.[5] The regular absorption and longer pharmacologic activity of mecamylamine have diminished the occurrence of hypotensive crises and parasympatholytic manifestations.

This study was undertaken to evaluate the effect of mecamylamine and reserpine on blood pressure levels and vascular disease in patients with severe hypertension.

MATERIAL AND METHODS

Fourteen Negro patients, 5 male and 9 female were included in the study. The average age was 46 years (range 35 to 47).

Severity of the hypertensive disease was assessed by a pretreatment evaluation which included: complete history, physical examination, electrocardiogram, 6 foot chest film, intravenous pyelogram, BUN†, urinalysis and other special examinations as indicated. After a period of treatment, repeat studies of fundi, electrocardiogram, chest film, BUN and urinalysis were made to evaluate changes occurring during the period of therapy.

The diagnosis of severe hypertension was based on a mean blood pressure‡, of more than 140 and at least two of the following criteria:

a. Grade III or IV fundi (Keith-Wagener Scale)
b. Persistant nitrogen retention
c. Cerebrovascular accident
d. Cardiomegaly and abnormal electrocardiogram
e. Previous failure to respond to specific antihypertensive treatment.

Twelve patients were placed on reserpine 2 mgm. per day for four to six weeks prior to treatment, and all patients received this dosage concomitantly with initial mecamylamine therapy.[6,7] Mecamylamine was instituted initially in doses of 2.5 mgm. twice a day and was increased until blood pressure decreased to near normal levels or intolerable side effects appeared. The patients were followed at weekly intervals and dosage adjustments were made at these times. Blood pressures were determined by both doctors and nurses using a standard procedure. The lowest recorded blood pressure of a particular date was used in compilation of data.

On clinic visits careful inquiry was made regarding side effects and patients were instructed to report by phone any untoward symptoms. Parasympatholytic manifestations were treated with neostigmine and/or urecholine®, and, in addition, laxatives and enemas were used as necessary. The patients developing evidence of severe reserpine toxicity (depression, inability to sleep in the early morning hours, diarrhea) were placed on smaller dosage or reserpine was discontinued.

RESULTS

Dosage (Fig. 1):

In the first four weeks of treatment, marked postural hypotensive responses were observed with an average dose of 12.5 mgm. per day. Satisfactory hypotensive responses in the supine position occurred in only an occasional patient. The dosage of mecamylamine was stepwise increased in an attempt to obtain more normal blood pressure levels. At 8 weeks the average dose was 41 mgm. per day and at 20 weeks, 103 mgm. per day.

Presented at annual meeting of The Medical Society of Virginia, October 27-30, 1957.

From Hypertension-Renal Clinic, Department of Medicine, Medical College of Virginia Hospital, Richmond, Virginia.

* Mecamylamine was kindly supplied as Inversine by the Merck, Sharp and Dohme Pharmaceutical Company, West Point, Pennsylvania.

† Serum urea nitrogen.

‡ Mean blood pressure is calculated as diastolic pressure plus one-third of the pulse pressure.

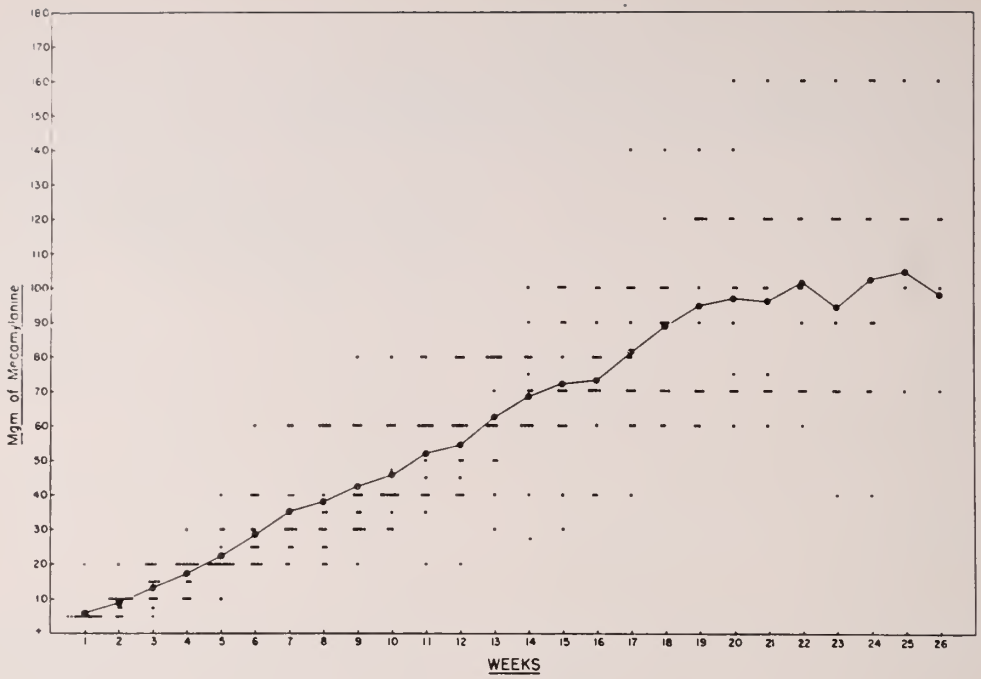


Fig. 1—Dosage of mecamylamine. The dose of mecamylamine for each patient is plotted at weekly intervals. The line represents the average dose.

Blood Pressure (Figs. 2 & 3)

Most of the patients showed definite postural hypotensive responses to moderate drug dosage in the first 16 weeks following institution of mecamylamine. No decrease or only slight decrease in reclining blood pressures were observed. During the latter part of treatment reclining blood pressures rose above control levels and postural hypotensive responses were much less marked.

Fundi:

In one patient regression of papilledema occurred. In three other patients retinal hemorrhages and exudates decreased. Arteriolar spasm was uniformly present in all patients and showed no essential change during therapy. No deterioration of fundi was observed.

Heart:

Eleven patients had cardiomegaly. None of these patients showed significant regression in heart size during treatment. One patient died of congestive failure at the 26th week of treatment. One patient succumbed to a myocardial infarction 26 weeks after start of therapy.

Central Nervous System:

Eleven patients complained of headache and dizziness prior to treatment. No patients showed improvement in these manifestations and an additional patient developed severe dizziness with mild ataxia. One patient died of an intracerebral hemorrhage on therapy and another patient who had had a cerebrovascular accident prior to institution of treatment developed further intracerebral hemorrhage at the 25th week of therapy but survived.

Electrocardiogram:

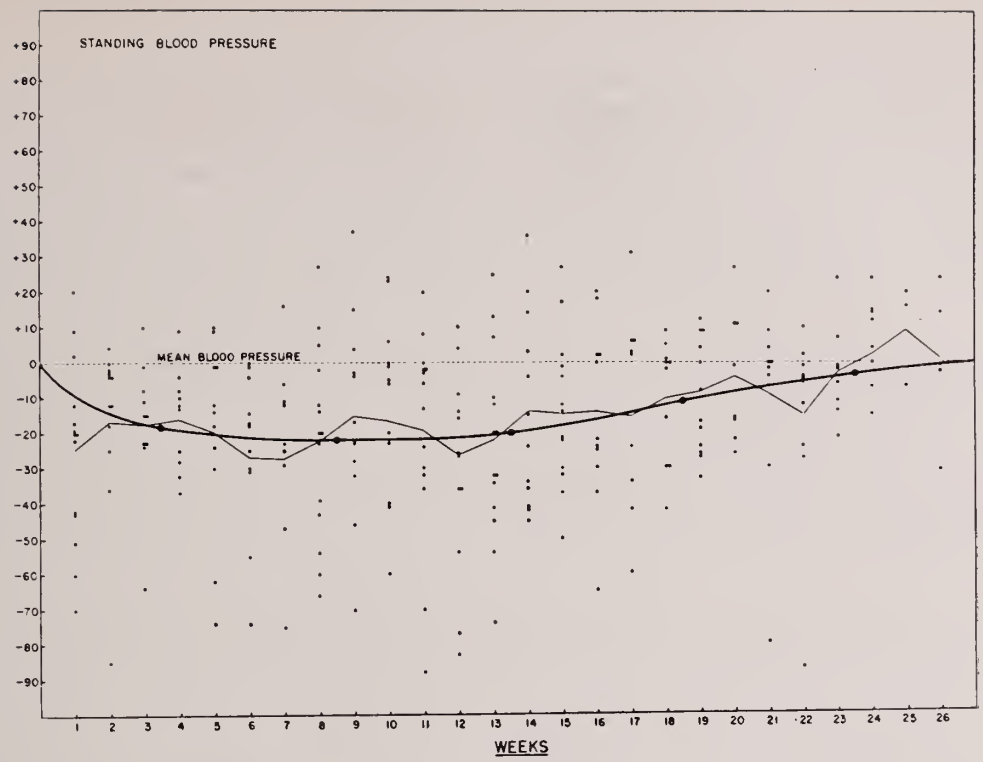
Two patients had electrocardiograms considered normal prior to treatment. The remainder had abnormal electrocardiograms compatible with left ventricular strain. One patient developed auricular fibrillation on treatment and another had auricular fibrillation throughout the period of observation. One patient with a normal electrocardiogram prior to treatment developed abnormal T waves during treatment.

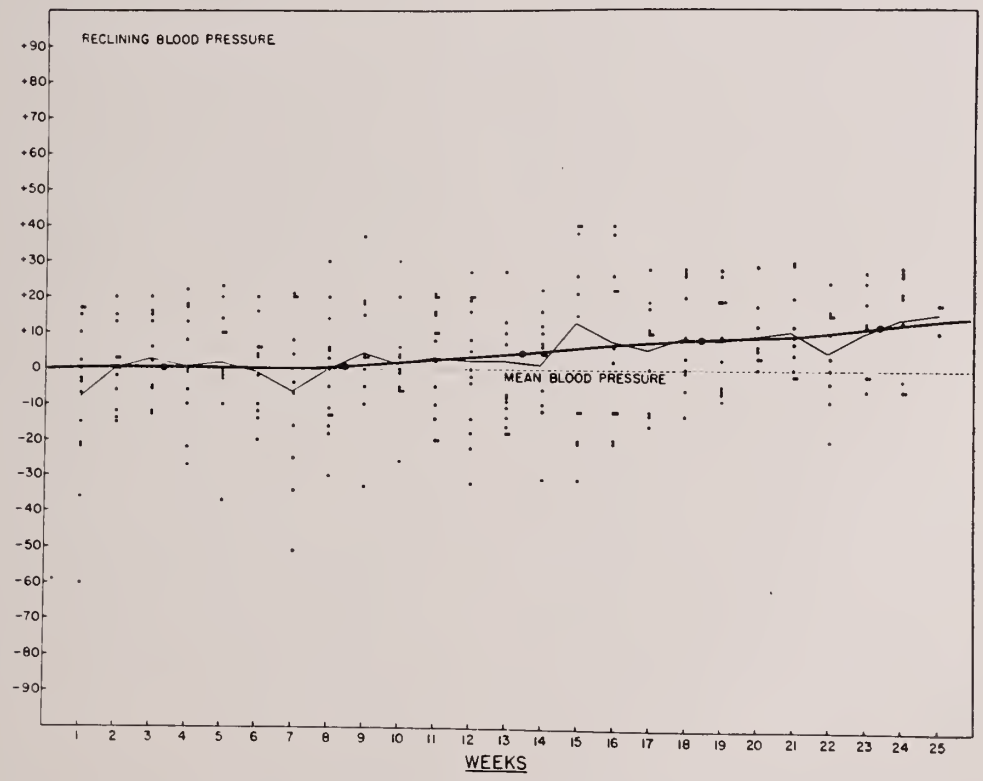
Renal Function:

Two patients had no evidences of renal impairment prior to treatment. The remaining patients all had evidence of renal disease. Eight patients had nitrogen retention with BUN between 27 and 45 mgm.%. The mean BUN for the entire group was 24 mgm.% prior to treatment. Two patients died in uremia. The BUN rose an average of 7 mgm.% in the other patients. No patient showed a decrease in the BUN during treatment.

Side Effects:

Thirteen patients complained of side effects dur-





Figs. 2 and 3—All mean blood pressures are plotted for each patient at weekly intervals in reference to the individual's control blood pressure level. All control blood pressures are superimposed on the 0 line. Points above or below 0 line represent blood pressures respectively above or below mean blood pressure. The fine line is the average weekly pressures and the heavy line is visually fitted to the trends.

ing treatment. Episodes of dizziness and weakness were usual when an effective hypotensive response occurred. One patient had convulsions on two occasion. Blurred vision was frequent. Dry mouth was practically universal, but responded to parasympathomimetic drugs. Constipation was frequent in early treatment but became a lesser problem as therapy was continued. Four patients developed diarrhea which was not controlled by discontinuance of reserpine.

Severe intention tremors developed in two patients; both had moderate nitrogen retention (44 and 64 mgm.%) and were taking reserpine, 2 mgm. per day. These tremors disappeared in three weeks following withdrawal of reserpine and addition of phenobarbital. Mecamylamine was continued in full dosage in one patient and in smaller dosage in the other.

DISCUSSION

The effects of mecamylamine must be interpreted with caution. Every patient had severe elevation of blood pressure and had already developed clinical hypertensive changes in the heart and/or kidneys. Failure to achieve control here must not be interpreted to indicate that similar results will be obtained in less advanced cases.

Significant and occasionally excellent postural hypotensive responses were frequently produced by moderate drug dosage in the first several weeks of treatment. Reclining responses were infrequent.

Later on in the treatment period, despite increase in mecamylamine dosage, the hypotensive response was progressively smaller. In the latter weeks of treatment, dosage up to 160 mgm. of mecamylamine per day had only minimal effect. The observed rise of the reclining blood pressures above the mean control blood pressure in the last three months of treatment is not readily explainable, but we do not feel it should be considered solely a part of the natural progression of hypertensive disease.

Side effects in general did not cause serious difficulty. We had no cases of paralytic ileus and constipation was easily controlled in all but one case. We can offer no ready explanation of the cases of diarrhea.

Death of four of the fourteen patients during the treatment period may be significant. An additional two patients have had to be dropped from the study because of hypertensive disease progressing to invalidism. Five patients were so refractory to the drug that other methods of therapy are now in use. This leaves only three patients who are still being treated primarily with mecamylamine.

SUMMARY AND CONCLUSIONS

1. Fourteen patients with severe hypertension have been studied in regard to their therapeutic response to mecamylamine in conjunction with reserpine.

2. Significant postural hypotension was obtained on moderate dosage in the first three months of treatment although there was a poor response in the supine position. A progressive diminution in therapeutic effect over the remainder of the treatment period regularly occurred with a tendency of the reclining blood pressures to rise above the control levels despite heavy dosage.

3. Except for some improvement in the optic fundi in four patients, no regression of the hypertensive vascular disease in the cerebral, cardiac or renal areas was observed.

4. Mild side effects were frequent and distressing although dangerous side effects were unusual. Convulsions were encountered in one instance. Serious constipation occurred only once. Diarrhea occurred in four patients.

5. Four patients died under treatment and it has been possible to continue treatment in only three cases.

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Physical Aspects of Dyspareunia

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MANY WOMEN request advice from the physician about sex problems. Some of these seek a greater thrill or derive vicarious pleasure from discussion of sex with the doctor. The physician who is not a psychiatrist would do well not to encourage this sort of discussion.[1] Another type is the woman who has an incompetent husband. She has a grave problem and should be referred to the psychiatrist. Actually, most women suffering from dyspareunia hesitate to bring up the subject. I find it a great help in promoting discussion to approach the problem from the purely physical aspects. These are four: 1. Vaginismus, or painful contraction of the vaginal muscles which prevents entry into the vagina; 2. Vaginal outlet relaxation; 3. Senile, or atrophic vaginitis; 4. Vaginal stenosis with perivaginal fibrosis. When I find any of these conditions present upon examination of a married woman I say to her, "I would imagine that sex relations are rather painful."

This usually opens the way, at first to hesitant replies, then to a matter of fact discussion about the problem.

Dyspareunia can often be prevented. Shortly after it occurs, it can be alleviated by relatively simple measures. When it is of long standing, it may tax the ingenuity and patience of the physician. When it follows episiotomy or pelvic repair, it may be embarrassing to the physician who performed the operation. When the condition does not respond to the measures herein outlined, the doctor should suspect underlying psychological problems. Some women utilize even minor vaginal irritations as an excuse to evade their marital obligation. I recall an old maid who married a successful small businessman in order to quit her disliked job. All was well for two years, then I saw her with the complaint of a vaginal irritation. Examination revealed senile vaginitis and marked vaginismus. Topical estrogen and self-dilatation overcame these, then she developed trichomonas in the estrogen stimulated vagina. This was cleared up but she still protested that her problem was unrelieved. Review of her domestic history elicited the fact that her husband had recently had a severe illness which depleted their savings. Because of his illness he lost his business and she had had to go back to work to support both of them. I advised her that I could offer no more help. She then developed bladder urgency and frequency and consulted a urologist.

The best time to prevent dyspareunia is before marriage. The single, most important reason for the premarital examination is to make certain that the girl is adequate for sex relations. Physicians disagree as to what else is important at this interview. My own policy is to fit the prospective bride with a diaphragm if she so wishes and to answer any questions that she wants to ask. Most young people do not need advice about sex from the doctor. If they do their questions should be answered factually and impersonally.

A vaginal introitus that admits a small vaginal speculum readily is usually adequate for sex relations. A tight, one finger introitus, or less, is indication that the hymen needs dilation. It is highly important that the patient perform this dilation herself in order to learn to relax her muscles. Even when surgical incision of the hymen is necessary the self dilation is important as a subsequent step. If it is not employed painful vaginismus will be the result. Graduated glass or plastic vaginal dilators are available. Rectal dilators will suffice. These sets must be supplemented for some individuals by two small test tubes, one the diameter of a lead pencil and the other a little larger. The dilation is performed by the patient, herself, at home. I have yet to have a patient who was unable to do this.

When a young woman is seen with an intact hymen that will not admit one finger she should be shown the small test tube the diameter of a pencil. This should be introduced through the hymen by the patient with the physician guiding it. Nothing further can be accomplished on this visit. She should be given a set of graduated dilators and instructed to use them at home. It will usually be easy to perform a vaginal examination at the next visit. After this sex can be consumated with little discomfort. If the smallest test tube cannot be introduced surgical incision of the hymen will be a necessary preliminary procedure to the self-dilation.

When a married woman is seen who has been unable to consumate her marriage because of pain-

ful vaginismus she should be instructed to discontinue sex relations. She should then practice self dilation until she is able to pass a relatively large dilator after which sex relations can be resumed without discomfort. A painful episiotomy scar will often produce this situation after childbirth. Discontinuance of sex relations and self-dilation will efface the problem. I have successfully treated women who have had dyspareunia for several years by this method.[2] Some of these individuals had had repeated forceful attempts at dilation by other physicians both with and without anesthesia without relief. Vaginismus is an involuntary reflex, conditioned by an initial painful experience and added to by successive trauma by the husband or the doctor. The pubococcygeus muscle has both involuntary and voluntary control. The involuntary, painful spasm of the muscle can be prevented or overcome by the patient's self-induced relaxation. Surgery to the vagina and postmenopausal senile changes in the vaginal tissues may be followed by physical obstructive factors. In every instance self-dilation to overcome painful vaginismus is an important part of treatment.

Vaginal outlet relaxation rarely produces dyspareunia unless it is accompanied by prolapse of the bladder, or uterus, or both. In such instances the prolapse usually bothers the patient more than sex discomfort and is the primary reason for reparative surgery. One must be careful not to repair these too tightly and it is my usual practice not to repair lesser degrees of rectocele for this reason. When a large rectocele, or a combined recto-enterocele is present there is no choice but a posterior repair and such individuals may need a period of self-dilation before they can resume sex relations.

In older women senile changes in the vaginal mucosa and perivaginal tissues commonly cause dyspareunia. Senile vaginitis is often overlooked.[3] The early stage is manifest on vaginal examination by thinning and redness of the vaginal mucosa. The diagnosis can be confirmed by a wet smear of the vaginal secretion which will disclose an appreciable number of small, rounded, immature epithelial cells instead of the sharp-cornered cuboid or rectangular mature cells. Unless symptoms are present no treatment is called for. The symptoms requiring treatment are dyspareunia, irritating vaginal discharge and bleeding. The treatment of senile vaginitis is specific. Topical estrogen reverts the mucosa promptly to a mature form. Most individuals so affected will respond with promptness and gratitude to a daily local application on an estrogen suppository or creme for two or three weeks. Thereafter a small amount should be used once or twice a week for an indefinite period since the condition will ultimately recur if the estrogen is stopped. It should be remembered that a woman who is taking oral or hypodermic estrogen for menopausal or other reasons cannot have senile vaginitis. If she complains of dyspareunia it must be from some other source. The administration of estrogen in any form, including topical, to the post-menopausal woman often flares up trichomonas or monilia vaginitis. This, in turn, may produce a painful vaginismus. Such a situation may require treatment of the secondary vaginitis plus self-dilation. The simpler measures for relief of trichomonas and monilia are the best. Overtreatment with harsh chemicals may add an ulcerative chemical vaginitis with secondary bacterial infection to an already complicated situation.[4]

In post-menopausal women endometrial carcinoma must always be kept in mind. If any bleeding is present or if there is a profuse discharge from the endocervical canal, a curettage is indicated before treatment of the vagina is commenced. I have seen several women with sufficient senile vaginitis to cause bleeding who have also had an early endometrial carcinoma.[5] In some of these the primary complaint was dyspareunia.

Vaginal stenosis and fibrosis in my experience are either the result of surgical scars in the perineum or of untreated senile changes in the vaginal tissues. Advanced senile fibrosis may almost obliterate the vagina, particularly in the upper third. I have seen two instances of partial rupture of the vagina which resulted from a combination of stenosis and forced sex relations while the patient was under the influence of alcohol. Such cases require long range estrogen therapy to mature and soften the vaginal tissues plus self-dilation to overcome the narrowing of the vaginal lumen and vaginismus. In many instances a plastic operation is necessary to enlarge the vaginal introitus but it should only be performed after the first two measures of therapy have been used for an adequate period. It is equally important that they be continued after the operation.

When estrogen is begun the woman should be cautioned that it may cause a burning sensation in the vagina and also produce some vaginal discharge. In addition, she may absorb enough of the drug from the atrophic vaginal mucosa to make her breasts sore and even give her hot flushes. After these inconveniences wear off it may be expedient to sub-

stitute a small oral dose of estrogen for topical application. This is particularly true in those cases where a reactivated trichomonas or monilia vaginitis requires local treatment. I find that 0.3 milligrams of oral conjugated estrogen taken three days a week is the approximate optimum dosage in such instances.

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Pets for Children

The joy that children receive from pets, particularly dogs and cats, far outweighs the danger incurred from bites and disease that the animals may inflict on them. This was revealed in an article by Dr. Hugh A. Carithers, of Jacksonville, Fla., which appears in the February issue of the Journal of Diseases of Children, published by the American Medical Association.

The report noted no serious or lasting effects to 157 children who had been bitten by one of 10 species of animals during the 20-month study.

The majority of children bitten were between the ages of 2 and 10 years. "This is during the time when parental protection wanes and the adventurous spirit takes over. After the 10th year a child has attained considerable discretion in handling animals."

A boy's natural aggressiveness towards animals was illustrated by the fact that males held a 3 to 2 ratio over females in the number of bites.

Seasonal factors seem to have little or no importance as to when an animal might attack. No less than 4 nor more than 15 cases were recorded in any one month.

Of the various animal bites examined during the survey, the dog was the most frequent offender. "To his credit, however, it should be pointed out that the child was usually at fault."

Why do dogs bite children? Observations seem to indicate the following reasons are most common: in self-defense; unintentionally during play; and in protection of their property.

In addition to the dog, other animals involved in the study were the cat, rabbit, squirrel, horse, rat, hamster, monkey, skunk and raccoon.

Dr. Carithers feels that the emotional and educational value of pets far outweighs the danger of bites and disease to which children are subjected. He offers the following suggestions to help prevent accidental biting:

"Children should not own pets until they can care for them and show discretion in their handling. Such ability is rare under the age of 4 years and unusual under the age of 6 years.

"Usually older animals are to be preferred to immature ones as pets for young children.

"Children should be taught that animals have rights, including an existence free of pain and excessive teasing."

He also suggested that children be taught to avoid all strange animals, especially sick or injured ones. When small, children should be taught not to trespass, and, as older children, when riding bicycles, they should deliberately avoid routes where dogs are known to chase vehicles. Under adult supervision, children should be encouraged to make friends with pets in their neighborhood. An adult should be called when a child finds two animals fighting.

Saddle Embolism

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THIS IS THE CASE of a white female patient, Mrs. O.G., age 42. Before the present admission, she had had two previous admissions. One was on November 13, 1951, for recurrent cystitis and cystocele with no operation for the latter. She was admitted again on April 3, 1955, and at that time a diagnosis of peptic ulcer with perforation was made. She improved markedly on Levine suction and, with an ulcer regime, was discharged in twelve days, symptom free. A gall bladder series at this admission showed a poorly functioning gall bladder with no evidence of stones.

On April 29, 1955, she was admitted again to the hospital complaining of loss of appetite and mild epigastric pain. She also stated that for the week prior to admission she had not felt like being up at all. To evaluate the past history, the patient had had the two previous admissions. She had also been treated for a duodenal ulcer as an out-patient three years previously. Otherwise, she had had no serious illnesses, operations or accidents. She has two children. Menstrual periods were regular. History by systems was noninformative. Physical examination revealed a well developed and nourished white female tending toward obesity. She appeared apprehensive, complaining of extreme weakness. The head and scalp were negative. The pupils reacted equally to light and accommodation. The fundi were normal. ENT—negative and normal. Neck—no tenderness or rigidity, thyroid gland was not palpable. Thorax—lungs were clear. Heart—rate was rapid, pulse 120, blood pressure was 110/80, rhythm regular, no thrills or murmurs. Abdomen—no masses, tenderness or rigidity, no herniae present and no ascites. Vaginal and rectal—within normal limits. Extremities—normal with pulsations present and equal in the dorsalis pedis and posterior tibial arteries. Reflexes—hyperactive. Laboratory examination—on admission the HBG was 13.1 grams, RCV—47, leukocytes—7850 with a normal differential. Urine was negative as was the serology. Blood urea was 18.8 milligrams and the sodium, potassium and glucose were within normal limits. EKG—examination on April 29, 1955, showed sinus tachycardia, on May 1, 1955, sinus tachycardia, questionable coronary ischemia, and on May 2, 1955, the findings were of a possible coronary occlusion with myocardial infarction. The bleeding and clotting time was normal and the chest x-ray showed no abnormalities. She was placed on complete bed rest and sedation. On May 4, 1955, the patient was seen by Dr. Willis R. Lacy who was her attending physician. About 8:45 P.M. the patient complained of sudden, severe pain and numbness of both legs. Dr. Victor F. Albright was called in consultation at around 10:00 P.M. On examination at that time both feet, legs and thighs were blanched and cool. The veins were collapsed and there were no inguinal, popliteal or peripheral pulses palpable on either side. Impression was of saddle embolus and immediate surgery was recommended.

The patient was prepared immediately and the anesthetic was begun at 11:00 P.M. A lower midline incision was made from the pubis to a little above and left of the umbilicus. The peritoneum was opened and manual examination of the aorta revealed that pulsations ceased about 1½-2 inches above the bifurcation. The posterior parietal peritoneum was incised over the aorta and iliac arteries. These vessels were then dissected free. A ½ inch gauze tape was passed around the aorta and held with a clamp. Tapes were then passed around the iliac arteries at a level presumed to be distal to the embolus. After tightening all tapes, an incision was made just above the bifurcation for a length of 1 inch. Through this incision a large saddle embolus was removed which had completely blocked the aorta and extended down into the iliac arteries. When the tape was released above, there was brisk bleeding with no evidence of obstruction. When the tapes were released on the iliac arteries, there was some back bleeding but not excessive in amount. A ureteral catheter with suction was passed into each iliac artery but no further clot was obtained. The incision in the aorta was then closed with a running suture of 00000 arterial silk. All tapes were released. At this time it was felt that the pulsations in the left iliac were poor to absent. Accordingly, an incision was made in this artery and, with further suction by means of a catheter, 2-3 inches more of

the embolus was removed. At this time the back bleeding was quite brisk. Palpation of the dorsalis pedis arteries at this time showed good pulsations in the left but weak to absent in the right. Accordingly, the same procedure was carried out on the right iliac artery with removal of residual embolus. The iliac arteries were closed in the same manner, the posterior peritoneum closed and the abdominal wound repaired in layers. An incidental finding at the time of closure was a subsiding acute cholecystitis. Before leaving surgery both lower extremities were warm and of normal color with equal peripheral pulsations bilaterally. The patient received 1000 cc. of whole blood and 1500 cc. of molar lactate during the surgery. The anesthesia was endotracheal, closed ether and oxygen.

Post-operatively the patient received depoheparin and then dicumeral. Her postoperative course actually was uneventful with the exception of the regulation of her dicumarol therapy. She received solid food on the second post-operative day. She was up in a chair on the sixth post-operative day and was up walking on the sixteenth post-operative day. She was discharged on dicumarol therapy June 4, 1955.

The follow-up on this patient we consider to be the most remarkable part of her history. She continued to do well following her saddle embolectomy until August 16, 1955, when she was again admitted with right upper quadrant pain and symptoms again referable to gall bladder disease. She improved markedly and on conservative therapy was discharged August 20, 1955, symptom free.

She was again admitted on March 17, 1956, with a diagnosis of acute cholecystitis and it was felt at this time that surgery should be performed. On March 8, 1956 she was taken to surgery and a cholecystectomy was performed. Though she had an icteric tint at the time of surgery, because of the technical difficulties encountered and the obliteration of land marks, the common duct was not opened per se. Palpation of the duct did not reveal any obstruction. The common duct was probed through the stump of the cystic duct and again it was felt that there was no obstruction in the common duct. Catheter was placed into the common duct through the cystic duct opening. About ten days following this operation, a cholangiogram revealed a stone in the common duct. On April 16, 1956, a second operation was performed and a fairly large impacted stone was removed from the common duct. The patient's post-operative course was uneventful and she was discharged on the tenth post-operative day. The patient was seen on May 13, 1957, and is in the best of health and spirits with no complaints whatsoever.

In submitting this article, as the surgeon on the case, I wish to express my apreciation to Dr. Willis R. Lacy for his continuous and invaluable supervision of all the medical aspects, without which the surgery would have been to no avail.

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Wheel Chairs

Just any wheel chair won't do for a person who must spend most of his life in one. The wheel chair should be "prescribed to fit the patient's measurements and modified to meet the demands of his disability," according to an editorial in the January 4 Journal of the American Medical Association.

Factors to be taken into consideration when selecting a chair are the width of the doors and turns in narrow halls through which it must pass, whether it will be used outdoors, and the patient's ability to use his hands in moving it.

Foam rubber cushions and arm, leg and head rests will help make the patient more comfortable. A variety of attachments, such as detachable trays, can help the patient be more independent, the editorial said. But everything about the chair must be suited to the individual patient.

Angiokeratoma Corporis Diffusum Universale (Fabry)

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ANGIOKERATOMA CORPORIS DIFFUSUM UNIVERSALE is a clinical entity which apparently involves the skin, vascular, renal, cardiac and pulmonary systems.

Recently the first case report of this entity was published in this country by Dr. Phaedon Fessas, Dr. M. M. Wintrobe and Dr. G. E. Cartweight. This entity apparently is extremely rare and little is known concerning the condition (only nine previous cases reported). It was felt that any similar such case might be of value in bringing other instances to light. The diagnosis in the case being reported here was not suspected until the publication of the article mentioned above.

This twenty-one year old white male has been followed approximately five years. He was initially seen because of severe aching in his arms and legs accompanied by temperature elevation and chills. The patient in 1953 gave a history of having had innumerable such episodes as far back as he could remember, the diagnosis being rheumatic fever. Questioning of the family revealed that the patient had been subject to such spells since the age of six.



Fig. 1
Scrotal view showing frequent areas of pigmentation.

He had noted the appearance of purplish spots over his buttocks since that date. The patient described his attacks of pain as being aching in nature and accompanied by some swelling of the face and hands. He noted that the spots were increasing in number and none of them disappeared. Physical examination revealed an acutely ill white male with a temperature of 103. His physical examination was otherwise negative except for the findings of purplish spots located about the umbilicus, on the buttocks and scrotum. Laboratory data at that time revealed a normal urinalysis, a white cell count of 5,900 with 36 segs. 51 lymphs. and 3 monos., red cell count of 4,290,000 platelet count of 458,300, a negative



Fig. 2—View of the lower back.

serology and a bleeding time of two minutes thirty seconds, clotting time five minutes. Blood cultures revealed no growth. A chest x-ray and electrocardiogram were reported as normal. It was felt, at that time, that the patient was suffering from Henoch Schönlen purpura. Subsequently the patient had episodes of aching pain, chills and fever occur-

ring every two to three months. He has been hospitalized five times during the last four years because of the severity of the episode. His laboratory data



Fig. 3—Umbilical view shows a few lesions.

during those hospitalizations was essentially similar to that of the initial admission. Because of nervousness, on one occasion, a radio-iodine uptake was done. This uptake was normal. Two bone marrows were found to be normal. Capillary fragility test was reported on several occasions as normal. Two biopsies have been performed and have not revealed any particular abnormalities. The patient has had innumerable laboratory studies which include those of two medical centers (Medical College of Virginia* and Duke University Hospital). Both have concurred in the diagnosis. Other studies of interest include cholesterol 225, NPN 35, total protein 7.1, alb. 4.6, glob. 2.5, PSP 60% in thirty minutes, 95% total excretion in two hours. Pulmonary function studies were normal.

X-ray of chest and skull were normal. Serum electrophoretic pattern was reported as normal. The patient developed some albumin in his urine which was not present initially. So far his renal studies have otherwise been normal. This patient was treated, at the suggestion of the physicians at the Duke University Hospital, with cobra venom and experienced some alleviation of pain. He had previously been on cortisone for approximately a year with no ap-

*The diagnosis was originally made at the Medical College of Virginia in the Laboratory for Clinical Investigation by Dr. G. Watson James, III.



Fig. 4—Thigh view showing innumerable lesions, none of which have disappeared.

parent change in his condition. Numerous preparations for LE cells were negative.

The patient, at present, seems to be somewhat improved. He prefers working in a cool climate than a warm one as apparently he has more difficulty with heat than with cold; however, his attacks of pain have occurred under both conditions. This patient's urine has been studied on numerous occasions for the "fat cells" described as being present in this disease and so far none have been found.

DISCUSSION

J. Fabry in 1898 first described a case of Angiokeratoma Corporis Diffusum Universale. Since then nine other cases have been reported in the literature. The disease first manifested itself in childhood with appearance of "red spots" which increase with age. These characteristically are located on the lower back, buttocks, upper thighs and umbilicus. They do not bleed and occasionally blanch slightly on pressure. Systemic manifestations are rheumatoid pain and paresthesias, swelling of the legs, dizziness, headaches and weakness. Hypertensive cardiomegaly, emphysema, and renal pathology have been found. Death occurred from uremia in two cases and coronary thrombosis in a third.

Pathological studies in the autopsied cases indicate the "presence mainly of some abnormality in the smooth muscles of the entire vascular system, considerable increase in the size of the media and varying degrees of vacuolization of the smooth mus-

cle by a substance which was found to be birefringent under polarized light."

In the Fessas case, the patient did not show the stainable lipoid substance which may be due to the fact that the disease has not progressed sufficiently.

In suspecting the diagnosis the skin lesion has to be differentiated from purpura and hereditary telangiectasis. The lesions of the latter diseases are located principally on the face and distal parts of the extremities, while the lesion of Angiokeratoma Corporis Diffusum Universale are located on the lower part of the trunk, proximal part of the extremities and about the umbilicus. The latter lesions do not blanch as do those of hereditary telangiectasis. The color is darker red in Angiokeratoma and is permanent. This latter fact differentiates these from purpura. Hereditary telangiectasis is not characterized by systemic features while Angiokeratoma Corporis Diffusum Universale apparently involves nearly all of the body systems. Also the lesions of the latter conditions do not bleed, while the former frequently have hemorrhagic manifestations.

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Doctors to Head West for AMA Annual Meeting in June

Between 12,000 and 15,000 physicians will journey westward in June in search of something far more valuable than gold. They'll go on a quest for the latest information on new medical techniques and discoveries at the American Medical Association's 107th Annual Meeting in San Francisco. The five days of June 23-27 will be filled with bright nuggets—including scientific exhibits, lectures, motion pictures, panel discussions, televised surgical procedures and commercial exhibits. Convenient center for the Scientific and Technical Exhibits, films, color TV and lectures will be the Civic Auditorium, the adjacent new Plaza Exhibit Hall and other surrounding buildings. Headquarters for the House of Delegates sessions will be the Sheraton-Palace Hotel.

Plans for an outstanding scientific lecture program are being completed by the Council on Scientific Assembly. Opening the general scientific program Monday afternoon, June 23, will be a symposium on the care of the severely injured patient. Tuesday morning's general meeting will feature another symposium on hazards associated with therapeutic agents. Formal scientific section meetings will run from Tuesday afternoon through Friday morning.

Special panel discussions and demonstrations are being planned throughout the meeting, including: perinatal problems; methods of resuscitation of infants; nutrition; physical examination of physicians, using electrocardiograms and chest x-rays; fresh tissue pathology, and treatment of fractures. The Section on Miscellaneous Topics also is planning sessions on allergy, prevention of traffic accidents, prevention of injury in sports, and medical professional liability. Other features will be a color television program of live operations and demonstrations from San Francisco Hospital and a varied motion picture program.

Two high school winners of AMA scientific awards at the National Science Fair again will display their prize exhibits. In addition, the top winners of the intern-resident and medical student exhibit classifications at the Student AMA convention this spring will be invited for the first time to exhibit at an AMA meeting.

Registration officially opens at the new Plaza Exhibit Hall Monday, June 23, at 8:30 a.m. and closes Friday noon. Advance registrations will be accepted Sunday, June 22, from 12 noon to 4:00 p.m. The Scientific and Technical Exhibits will be open to AMA physician-members *only* on Tuesday and Wednesday mornings.

The Development of General Medical Services for the Indigent

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BY THE NATURE of their responsibilities, the practicing physician, the public welfare agency and the public health department are concerned with any tax-supported program which provides medical care to indigent persons. The responsibilities and relationships involved follow no single pattern but depend upon the available resources, past experiences and particular needs of the individual community.

In Russell County, the practicing physicians, the Department of Public Welfare and the County Health Department have developed a cooperative program for the provision of medical-care to public assistance recipients. This paper is a report on the development of this program.

The program actually began in 1952 with an investigation of medical services available to welfare clients at that time. This investigation was sponsored by the County Medical Society and was carried out by the Departments of Public Health and Welfare.

The investigation revealed that medical services to welfare clients were obtained by the client from any physician or hospital and only subject to authorization by the local Welfare Department. Authorization was generally granted on the basis of information given by the patient and/or the physician concerned. This arrangement had inherent certain obvious faults.

A major fault was demonstrable in that the authorizing agent, for such medical services, was not oriented in the medical profession and thus did not possess sufficient information to adequately judge the need, desirability or merit of the various requests for medical services. This fault promoted expenditures which were at times unreasonable and occasionally beyond the intended scope of the medical-care program.

Too, because of the lack of informed control of the patients, the medical services of voluntary and public health agencies were not always made available to the patient. For instance, authority may have been given a patient to obtain medical service from a private physician when the care needed was available in some health program with which the authorizing agent was not familiar. This duplication of services not only cost more to operate but in certain cases did not provide the best care of the patient.

The Welfare Board functioned without the routine advice or opinion of the medical profession. Decisions with the strongest of medical implications were made by the lay members of the Board.

Applicants for public assistance were evaluated on the basis of information submitted by any practicing physician. Due to lack of facilities, partiality to the patient, professional neglect and the time element involved, much of the information submitted was inadequate for proper action. This hindered evaluation of the patient's need, both to the detriment of the applicant and to the administration of welfare funds.

Rehabilitation of remedial cases was difficult since there was no coordinated medical direction. Treatment directed to rehabilitation and dismissal from public assistance was sometimes refused because of lack of insight from the medical viewpoint.

Then, of course, all of these factors allowed occasional acceptance of unnecessary expenditures. Excessive fees and drug bills were received, extensive hospitalization occurred and patients received duplicate services because of their "physician-shopping" habit.

As a result of the investigation and on the assumption that these faults were remedial, several meetings were arranged between local physicians, the Department of Public Welfare, the Health Department and the Russell County Board of Supervisors. From decisions reached in these meetings, three initial steps were taken.

1. A "screening" facility was established to locally determine the medical eligibility of welfare applicants. This facility took the form of a weekly clinic, conducted by the local physicians and Health Department, in which all applicants for public assistance were examined and a comprehensive medical opinion was rendered. At that time the clinic did

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not offer treatment but served only a "screening" purpose.

2. A Medical Advisory Committee, composed of local physicians, was formed to serve in an advisory capacity to the Department of Public Welfare relative to specific medical problems.

3. The local Health Department assumed the role of coordinator of medical services rendered to the indigent-sick.

During the first three years of operation, the program was periodically evaluated and certain observations were made.

The plan definitely improved the working relationship of the Department of Public Welfare, the Health Department and the medical profession.

The plan provided an opportunity for control and coordination of medical services to welfare clients.

The plan promoted the use of existing Health Department programs. For instance, out of 320 patients screened during the first two years, 128 received some diagnostic or treatment service by referral from the screening clinic to other Health Department clinics or programs.

The plan served as a case finding program. Unknown cases of malignancy, syphilis, gonorrhea, diabetes and tuberculosis were detected through the clinic.

Another result of the screening activity and coordinated medical supervision was the economy factor. In the fiscal year of 1953-54 the average hospital stay of Russell County patients, who were hospitalized under the State-Local Hospitalization program, was 7.2 days and the average cost per case was $87.56. During the same period the average hospital stay for the State of Virginia, under the State-Local Hospitalization program, was 11 days and the average cost per case was $145.98. In fiscal years 1954 and 1955, the average hospital stay and average cost per case of Russell County patients was again well below the State average as well as the average experienced in counties adjacent to Russell.

However, one of the most important observations made was the fact that the patients with whom we were working, were for the most part indigent chronically ill persons.

In view of this observation our group logically concluded that the original screening function needed to expand in order to provide some degree of medical care. Basic to subsequent action, three guiding axioms were agreed upon.

1. Care of the chronically ill is inseparable from general medical care.

2. The basic approach to chronic disease must be preventive.

3. Generally, the care of the chronically ill should be established on the principle of care in and around the home.

To best meet the above criteria in view of local needs, it was decided to establish a General Medical Clinic which would not only continue the screening and advisory activity but would also provide out-patient medical care. The clinic was activated, entirely with local funds, in January, 1956, and continued as such until July 1, 1956, at which time additional funds were made available through the Virginia Advisory Legislative Committee and the Virginia State Department of Health. Prerequisite to receipt of these funds the clinic was designated a demonstration General Medical Clinic and with minor administrative changes became a pilot study of a plan to provide coordinated medical care to the chronic indigent-sick.

The remainder of this paper will be devoted to a brief discussion of our preliminary observations in the operation of this pilot study during the past 18 months, January 1956 to July 1957.

The primary design of the activity is to provide medical administrative facilities for the screening and disposition of the patients admitted. The entire program is oriented around a single general medical clinic. In general the clinic provides preventive, diagnostic and therapeutic services that are commonly offered by an adequate general practitioner in the operation of his private office.

Hospital care, when indicated for clinic cases, is provided on recommendation of the clinic physician and with subsequent authorization by the appropriate authorizing agent for hospitalization programs now in effect. This includes patients eligible under current programs of State & Local Hospitalization (S.L.H.) as well as those eligible under present Vocational Rehabilitation services and other categorical programs administered through the local Health Department.

Dental services are not rendered as an operation of the clinic but upon recommendation of the clinic physician the Superintendent of the local Department of Public Welfare may authorize such services to be provided by local practicing dentists.

Bedside nursing care, as such, is not provided; but, where indicated and upon recommendation of the clinic physician, the Director of the local Health

Department may approve acceptance of the patient for services normally rendered through Public Health Nursing Supervision.

Throughout the entire program emphasis is placed on the preventive and control aspects of the conditions exhibited by the patients admitted.

The eligible population consists of public assistance recipients and medically indigent residents of Russell County. Medical indigency is determined by the Department of Public Welfare.

Patient visits to the clinic are by appointment only. Appointment may be entered by request of eligible individuals, by referral of local physicians or return appointment given by the clinic physician.

The coordination and integration of available services are both vertical and horizontal. The welfare social worker, vocational rehabilitation personnel and the Health Department staff are integrated, through the clinic, as a team. Referrals for assistance and information relative to individual cases flows back and forth, in these three groups. Rehabilitation and social workers are encouraged to attend the clinic with problem cases and clinic physicians assist by giving information as needed.

The clinic is held in the Russell County Public Health Center each Friday afternoon. It is staffed by a public health nurse and a local physician who serve on a rotating basis with the other physicians of the community.

The clinic budget for the fiscal year 1956-57 allowed for the employment of an additional public health nurse, an honorarium to the clinic physician of $15.00 per clinic, the purchase of certain equipment, the provision of laboratory services through purchase in the local hospital and a limited number of consultation services. Drugs are obtained by individual prescription and are paid for through the Department of Public Welfare.

Each new patient admitted to the clinic is accompanied by a referral sheet which gives identifying information and outlines the nature of the referral. On admission a clinic folder is opened for each case. This folder contains all information pertinent to the case and is filed in the local Health Center. This record is also available to private physicians and the hospital. The availability of such a central file expedites the handling of the cases both in the private physician's office and when hospitalization is required.

On discharge from the clinic a medical summary of the case and a cost analysis is entered in the closed folder. In the past 18 months, January 1, 1956, to July 1, 1957, 65 patients were discharged from the clinic. Of the 65 discharged patients, 22 were either cured or considered improved to the extent that they could return to work and be dismissed from public assistance. Seven out of the 65 died. The remainder were either referred to other available treatment facilities or became ineligible for further Welfare assistance.

On September 1, 1957, our total clinic case load consisted of 221 persons. All of these patients were white, 116 were males and 105 females. To handle the case load required an average of 12 patient visits per clinic. At this rate and on the basis of 50 clinics during the past fiscal year, the services of the physician cost $1.25 per patient visit. This is in contrast to an average fee of $3.00 previously paid for an office visit.

The age distribution of current clinic cases ranges from 2 to 85 with a median age of 47. This relatively low median age is of importance in that it indicates the potential chronicity of many of the illnesses. Also, it emphasizes the moral and economic necessity of early rehabilitation of the long term indigent-sick. With rehabilitation as a primary objective, it is of interest to note that 127 of the current clinic population either has or is now receiving rehabilitation services or specific therapy through special clinics or hospitals to which they have been referred.

The types of illnesses exhibited in the clinic largely consist of the degenerative diseases that have existed for sometime prior to the patient's admission to the clinic. It is estimated that 48% of the admitted patients have varying degrees of non-reversible pathology in this general classification. In such instances our efforts are directed to the control of the disease process, alleviation of discomfort and the prevention of harmful sequela. Approximately 25% of the cases have remedial defects which under proper treatment allow physical rehabilitation. The remainder of the cases usually represent acute illnesses and other disease processes which readily respond to treatment, but which without adequate therapy may develop into long-term pathology.

SUMMARY

This paper has been presented as a narrative description of the development and operation in a rural area, of a cooperative program for the provision of clinic services and related medical care to the indigent-sick. From experience gained in the

development of this program the following opinions are expressed:

1. Medical care of the indigent-sick is a definite and increasing socio-economic and public health problem in Virginia.

2. Each community must define and approach its individual problem on the basis of local resources and local need.

3. Generally the solution of the problem is the joint responsibility of the practicing physician, the public welfare agency and the Department of Public Health.

Best Preventive for Tooth Decay

The best preventive for tooth decay is the development of teeth with a "high resistance" to decay, according to the American Medical Association Council on Foods and Nutrition. A good diet during the period when teeth are forming will help develop caries-resistant teeth, James H. Shaw, Ph.D., Harvard School of Dental Medicine, Boston, said in a special report for the council. It appears in the February 8th Journal of the American Medical Association.

The child's diet during the formation period should consist of a "generous selection of foods from all the basic food categories." They should be carefully cooked to preserve the original nutrient values. An ample supply of vitamin D (obtained mainly from vitamin D fortified milk and sunshine) should be provided daily.

A highly desirable factor in over-all diet planning for the development of caries-resistance is the growing availability of fluoridated water supplies. Small amounts of fluorine help prevent decay.

After the teeth are fully formed and have erupted into the mouth, the same attention must be paid to the diet. In addition, the eating of sticky high-carbohydrate foods that adhere to the teeth should be restricted. Experimental studies in animals have shown that tooth decay does not occur unless food containing a readily soluble form of carbohydrate is present in the mouth. It is not a matter of the total amount of carbohydrate eaten by the individual. "Of infinitely greater importance" are the form of carbohydrate and the circumstances that lead to its retention in the mouth. This is in contrast to the common feeling that all carbohydrates are harmful and should be eliminated as completely as possible. Shaw recommended that snacks and desserts containing large amounts of carbohydrate that stick to the teeth be replaced with fresh fruits, vegetables, fruit juices, or milk.

While a restriction of carbohydrates will help reduce tooth decay, the "greatest hope . . . lies in the development of teeth with a high resistance to tooth decay. This goal is no longer based on wishful thinking, as it appeared to be as recently as two decades ago."

Shaw concluded that his nutritional recommendations are not "uniquely designed to produce optimal dental health," but they are recommendations that will result in an over-all good nutritional state for the individual.

The Role of the Private Physician and of the Welfare and Health Departments in Tuberculosis Control

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THE HEALTH of the community as a whole and of its individual members is of concern to the private physician, the welfare department, and the health department. The subject of their cooperation and interdependence is too broad to be considered in all its aspects but, since this Health Institute is being sponsored by the Southside Tuberculosis Association, it seems fitting to discuss our mutual problems in tuberculosis. This is particularly appropriate as tuberculosis is still Virginia's chief communicable disease in spite of the work of private physicians, voluntary and government agencies to control it.

Let us consider briefly this disease, tuberculosis. We know that it is not inherited from our parents but is caused by a germ, the tubercle bacillus, and the disease can be contracted by contact with a person infected with these organisms. Tuberculosis strikes one American every five minutes and between fifty and sixty million of our people have the disease. about four hundred thousand of them in the infectious stage. At least one million two hundred thousand persons need medical care or medical supervision for active or inactive tuberculosis. Probably one hundred and fifty thousand persons infected with tuberculosis are unknown to health authorities and may not even know that they are sick for one may have tuberculosis without symptoms. During the next year about one hundred thousand people will be found to have active infection. Great advances have been made in both medical and surgical treatment and the disease can usually be cured if diagnosed early and treated vigorously. Last year, however, sixteen thousand people died of tuberculosis and it remains the leading cause of death in the age group from fifteen to thirty-four years. It is a major cause of death among American Indians and Americans of Spanish descent. The death rate among colored is three and one-half times that among whites. About twice as many men die of tuberculosis as do women. The mortality is very high among people of low income, those who receive public assistance, and those who are inmates of mental or other institutions. The incidence among older people is rising. We know that no one is immune to the disease by virtue of age, social, or financial status. Tuberculosis exists throughout the world and has been known in man since earliest times. It continues to be a scourge despite modern drugs and surgery.

Our challenge is to find people who have tuberculosis, to help them through the sometime arduous periods of treatment, to help them to resume their rightful places in their community and to see to it that continuing medical supervision is available to them. These are the problems we face today in the control of this age-old enemy of mankind. This is the job ahead in the field of tuberculosis control. It is difficult, it is ambitious, but it is necessary. Every case of tuberculosis is an indictment against society. It is irrefutable evidence that someone, somewhere, was either ignorant or callous to his responsibility in preventing unnecessary human suffering.

Just how are we going to combat this great problem? Sir William Osler once said, "The battle against tuberculosis is not a doctor's affair; it belongs to the entire public." It belongs to all of us. We must work together as a team of individuals, physicians, tax supported official agencies, volunteer agencies, and the tuberculosis association. No one group can do all the work. Again, we must cooperate.

As individuals we must try to keep in good health, eat a well balanced diet and get enough exercise, rest and sleep. If you are healthy, you are safer from tuberculosis than if you are malnourished and chronically fatigued. We should get physical and x-ray examinations each year. The private physician can be a great force in getting his friends and patients to take care of themselves.

The tuberculosis association is a partnership between physicians and community members. They work together to teach the people how tuberculosis

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can be prevented, or recognized and cured. It has done fine work in combating tuberculosis in our State and nation. The physician should find himself ever supporting this great volunteer agency not only in securing needed funds but also by aiding it in its educational program.

Since its beginning, one of the major functions of the State Department of Health has been the finding, diagnosing, treating and ultimate control of tuberculosis. When the Health Department was reorganized in 1946, the Division of Tuberculosis Control became a major department. Considerable progress has been made with State Sanatorium Clinics for tuberculosis detection, refill stations, education, and organization of facilities. The regional chest clinics have come into their own and show the value of consolidated effort. The local health services are rendering a great service in preparing for and aiding clinics and in looking after patients before and after their sanatorium sojourn.

The practicing physicians not only should, but must, cooperate with this tax supported agency if his people are to have their lives safeguarded from the ravages of tuberculosis.

The Public Welfare Departments have great responsibility in the program of tuberculosis control in any community, almost as much as the Department of Health. It is said that nearly fifty per cent of tuberculosis patients or their families in this country are forced to apply for public financial aid sometime during the course of this long, costly, and trying illness. People will not go to the hospital and stay there unless provisions are made for the care of their families at home. The practicing physician should support the Welfare Department by helping them get funds and by trying to show them the great need tuberculosis patients have for their services. The Welfare Department should investigate these people and try to find out what their needs are. This would require adequate social service, prompt granting of assistance to care for the patient or his family before, during and after hospitalization. They should provide incidentals while in the hospital and financial assistance when they come out. They should help unattached people and non-residents. They should help re-check the clinical status of patients, provide transportation to clinics, refer them for rehabilitation, help to get older people x-rayed and see that they have enough food, are adequately clothed and well housed.

The role of the private physician may be overlooked or his importance underestimated. Many cases of tuberculosis are revealed by the personal physician who is aware of the fact that every complete physical examination requires x-ray pictures of the chest. He is well qualified to supervise the management of those patients whose disease is of questionable activity. Very frequently such patients need careful observation for months or years and never have to go to the hospital.

He must be able to tell when patients are in the active phase of tuberculosis and need hospital care directed by a specialist. There they not only get the best care possible but also the isolation that protects other people from their germs.

The private physician must also keep himself informed in order that he can give these patients the needed care. It is inevitable that in the future tuberculosis will be treated largely by the practicing physician. The current trend seems to point to relatively short periods of hospital care with continuing home care when such care is available. This care may involve prolonged specific drug therapy and collapse treatment. The well informed personal physician is frequently best qualified to supervise this home care and medical observation. This requires clinical experience and judgment. It also requires a first hand knowledge of the patient as a person and here the private physician is in a better position than a physician in public health work who does not know the patient personally.

Yes, the physician works in many ways with individuals and organizations. He must treat the patient with understanding. He must support the tuberculosis association. He must work with the health departments in their efforts to prevent tuberculosis, if possible, and see that it is properly handled when found. He must report these cases of communicable disease in order that suspects and contacts may be properly checked and other people protected. He must keep himself well trained and alert. He must think of tuberculosis. I feel that he will do this, and more, and the future will see him working harder and more wholeheartedly with all groups in a cooperative effort to eradicate tuberculosis.

The Physician in His Community

L. BENJAMIN SHEPPARD, M.D.
Richmond, Virginia

TO OPEN our annual meeting, I have chosen as my subject, "The Physician in His Community". The day we received our diploma was one of gigantic metamorphosis. On that day we graduated to become the honored, respected and dependable physician who not only must become a servant to humanity, but must use his knowledge in practicing the principles of the art of healing. Most of us soon found out that study, examinations and research did not end as we walked out of the door of the medical school. As we became a part of the community, participating in its many activities, we often found the principles which had been learned in the laboratory and in the text book did not fit all situations. We soon recognized that we were dealing with the body as a whole and not with just one organ or one disease.

Furthermore, we recognize that this does not apply solely to medicine, for the headlines in the newspapers, and the material presented on television and on radio are often not the sole reflection of the important trends in our progressive world. If you would think of the basic trends of our times you will see that they often are not those that make the headlines. This is true of practically all fields of human endeavor, whether it be in medicine, religion, education, or government.

My subject today deals with an expanding field in which we must practice the art and science of medicine. In the practice of medicine the work we do outside of our office often plays an extremely important part in our better care of the patient. The physician's work is not always ended at the bedside or at the office for his constant thought is required in better serving the patient and in building and serving the community in which he lives. How we look at the world often depends on our point of vantage and this point of vantage is fashioned by our heredity, our early environment, our education and, most of all, by our faith.

We, in our generation, have seen great changes in medicine but the fundamentals of clinical medicine still embody those early principles of rest, cleanliness and good nutrition. In our time, men have championed many advances in medicine such as: the benefits derived from the removal of foci of infection, various antiseptics, physiotherapy, vitamins, hormones, antibiotics, vaccines, and, more recently, ultrasonic and radio-active methods for diagnosis and treatment. Each has its proponents. Only the element of time can prove which is the best treatment for a specific individual or for a specific disease. When we think of the changes in ophthalmology in the past 25 years, we think of the great advances in surgery, such as those related to detached retina, cataract extraction, muscle surgery, and the varied methods in the treatment of glaucoma. We are equally aware of the number of advances in improved medical treatment in opthalmology.

Progress rides in on the tide of change. Through activities in research come new ideas, new treatments, and renewed hope to mankind. These, however, emerge and thrive only so long as the ideas are supported by honest investigation such as experimental work. There are times that what at first may appear to be an inconclusive observation may well become an important fact after we determine from further investigation the true nature of the problem. Many of us are interested in varied phases of medical research, from the purely basic scientific research to the clinical application. The recording and publishing of ideas, concepts and findings are of the utmost importance. Anyone developing new procedures or having new concepts should be willing to present and share them with others. No one should underestimate the power of an idea or the effectiveness of the pen. Publishing of one's findings not only helps to disseminate knowledge, but it also helps to develop the physician personally and allows him to be better known outside of his own community. Writing helps to make the physician better informed on the subject being presented and probably is one of the important reasons why research should be published. The review and summation of material pertaining to a specific phase of medicine is equally important for presentation. Each of us, in our own time and in our own sphere may make a contribution not only to medical knowledge, but to a better community and a better world.

Participation in community endeavors is as im-

President's Address at the Thirty-eighth Annual Meeting of the Virginia Society of Ophthalmology and Otolaryngology, December 6, 1957, Roanoke, Va.

portant as the responsibility of a physician to his family and to his practice. The physician is one of the best educated members of a community, having had a minimum of eight years of higher education. He should be a leading citizen. Leadership is a natural role for him; he need not be the top ranking office holder in his community, but through his willingness to participate, to give of his time and efforts, he can inspire confidence in others, and a desire on their part, perhaps, for community leadership.

In addition to our sphere of medicine each of us has our own particular interest in which we should actively participate. As a citizen we should manifest interest in good government, in education, in religious and civic affairs. By our affiliation we immediately create a more friendly feeling and better public relations. Our responsibility to the hospital and participation in hospital staff meetings, as well as in various medical organizations, whether they be local, state, or national, are of recognized importance.

In our last presidential election there were 14 million qualified citizens in our country who did not take the time or the trouble to go to the polls and vote for the President of the United States or for those that must represent us in Congress. This year, in our November State election, only 55% of the qualified voters went to the polls to participate in one of our most important elections. Many of those who failed to vote were the so-called better people of our Commonwealth. It is true, it is certainly time we did something about taking an interest in things in our community, in our State, in our nation, as well as in our world. Many centuries ago, Plato said "the penalty good men pay for neglect is to be ruled by evil men." Then, less than a hundred years ago, Lincoln said "To sin by silence makes cowards of individuals." Once again I earnestly ask you to participate and encourage others to participate in your community activities. Go and express yourself in its many phases and protect your heritage.

Many lines of communication have welded our world into one gigantic community. World events affect us today. There can be no isolation. There are some who enter our profession and have become so engrossed in their immediate affairs, that they ignore all else. This is by no means confined to the medical profession. You will find it among many scientists, artists, and lawyers. Yet each of these may have the potential to make a worthwhile contribution. In our own State of Virginia are men who are making history by their unselfish interest for the betterment of man. No better example can be given than that of Dr. Fletcher Woodward, whose interests are not only in his home and in medicine, but in life itself. As you all know, he has contributed greatly to our betterment by his years of interest in promoting the automobile safety program. In this he has pioneered in soliciting the cooperation of the automobile industry to install safety features as standard equipment on cars and has suggested better laws to curb speeding. This year, 832 have been killed on Virginia highways. Does that not stir in us the desire to try to cooperate with the State and National authorities in endeavoring to make driving safer for ourselves and others?

We, as physicians, have been given certain responsibilities and privileges. Many of us have been given that responsibility of teaching those that will take our place in this world. In our educational program, we have the opportunity to point out that there is no definite line of demarcation between the different branches of medicine. Each is dependent on the other in the care of the sick. We do have the opportunity to emphasize the great service a physician can give in ophthalmology and otolaryngology, and how our country needs men in each of these specialties. The proper time to inspire, to plant the seed, or to interest the medical student is during his undergraduate years.

In our school years each of us had certain people, certain books, certain events that influenced our future. I will never forget one quotation of Ralph Waldo Emerson which hung on the wall of one of my high school rooms which read: "Hitch your wagon to a star." This quotation has carried with me through life. The youth of our country are our great hope and joy. It is our privilege to teach and guide them. They are the future. Too often we criticize our youth or even men who are making things happens in the world or making world-shaking discoveries. Every man has a place in our society. This is apparent especially to us in our profession where we have to care for those from infancy, to the steadily increasing number in the geriatric group.

Times have changed. They have changed our thinking and living with our family in our community of nations. It is time then, that we widen our horizons. When we stop to think about our freedom, our rights, our privileges, we realize that most of what we are and what we so cheerfully call

ours, is in a large part due to the work, foresight and thoughtfulness of others. It is time we talk less about our rights and privileges and do more to willingly accept community responsibilities. This is our duty.

Medical Arts Building
Richmond, Virginia

"Happy Accidents"

Most "accident-prone" individuals are considered a liability in their work, but there are some "happy accident-prone" people who are pretty important. They're the researchers, scientists, and doctors who accidentally discover some important thing while looking for something else, according to a special article in the December 21 Journal of the American Medical Association.

Among the most famous of medicine's "happy accidents" are Fleming's discovery of penicillin when he left a Petri dish uncovered and van Leeuwenhoek's discovery of bacteria when he focused a magnifying glass on a drop of water instead of on a fly's leg. Out of these grew the "penicillin age" and the science of bacteriology.

This ability to make some valuable or pleasant discovery without deliberately looking for it is called serendipity.

The most recent serendipitous event to make headlines was Dr. Winston H. Price's discovery of a common cold vaccine. This researcher at the Johns Hopkins School of Hygiene and Public Health was not looking for a common cold preventive, but was working on isolating influenza viruses. While he and his associates had unintentionally isolated a cold virus, it took a high degree of perception, combined with thorough laboratory technique to recognize the finding, verify it, and make the vaccine.

"Discoveries made by accident are never pure luck," the article quoted Dr. Robert Stormont, director of the A.M.A. Division of Councils on Therapy and Research, as saying, "They come about only because the men who make them are alert enough to fathom their usefulness."

Some of medicine's happy accidents include:

—The conquest of smallpox after Edward Jenner recalled the boast of a former milkmaid that she was immune because she had had cowpox—which then became the agent for mass immunity against smallpox.

—The development of the stethoscope after a Paris physician, Rene Theophile Laennec, saw children tapping messages to each other along opposite ends of a discarded plank. He recognized in the game the principle of the stethoscope.

—The discovery of saccharine when a chemist forgot to wash his hands before lunch. Having just worked with a strange chemical, he wondered about the sugary taste of his roast beef sandwich.

Serendipity occurs in medical practice as well as in the laboratory. For instance, many a family doctor, checking a patient's minor ailment finds evidence of an unrelated serious disorder that can be treated in an early stage.

In another article in the same Journal, Dr. Edward L. Compere, a Chicago orthopedic surgeon, illustrated serendipity's role in medical practice when he said, "much of what I have learned . . . has been with little effort on my part and not the result of intensive investigation or of delving into medical and scientific literature.

"New ideas have been handed to me by nurses, medical students, interns, and residents. The sum total of what I know or believe about orthopedic surgery includes many things which came to me because I seem to have the good fortune to possess 'the gift of finding valuable or agreeable things not sought for.' "

Whether it occurs in medical research or in medical practice, serendipity must have a substantial part of its mechanism embedded in the physician's total education, according to an accompanying Journal editorial.

Serendipity may become a "vast tappable human resource" if students are taught how to use it.

According to Dr. Edward Turner, secretary of the A.M.A. Council on Medical Education and Hospitals, who was quoted in the special article, medical education has already undertaken this task. Educational methods today come closer to inducing serendipity than ever before, he said. In medical school, the student is exposed to many phases of medicine. This helps increase his potential for recognizing situations that can help the whole patient.

Pre-Paid Medical Care....

Edited by
RICHARD J. ACKART, M.D.

New Blue Cross Benefits

If the new rates which the Richmond Blue Cross Plan is proposing for its Standard Contract are approved by the State Corporation Commission, a group-enrolled subscriber to the family Contract will be charged an additional $1.82 a month. Of this increase 34¢ will be for coverage of new benefits. Thus, the family subscriber will annually pay just $4.08—less than the cost of one tankful of gasoline—for services of a type or extent not now covered by his Contract. A few subscribers are questioning the propriety of being "forced" to pay any additional amount for any additional benefits. They may complain to their doctors about it.

From its inception Blue Cross has recognized that its value to the subscribing public would be enhanced were it to make available truly comprehensive service-benefits for subscribers, so as to eliminate their need to pay unanticipated bills at the time of illness. The proposed changes in the Richmond Plan's Contract will make available additional prepaid days of hospital care per year, will provide for care of nervous and mental disorders without special limitation, will cover the expense of care of newborn infants including that of "preemies", and will do more, too. (A comparative listing of all the new Blue Cross benefits is appended to this article.) The additional 34¢ per month to be paid by families—families with or without children—will prove an eminently sound investment in protection against unanticipated hospitalization expenses.

The decision to include additional benefits, at the rates necessary to cover the financial liabilities entailed, was based on the fact that most patients must somehow pay for the care they need—if not through prepayment, then out-of-pocket at time of illness. To the extent that the Blue Cross prepayment program is truly comprehensive, a subscriber's unanticipated out-of-pocket expenditures for health care are obviated. For the most part, it is an unexpected health care expense that causes a person to believe the government should regulate all such expense.

Blue Cross has always been the pioneer in developing truly comprehensive coverage of hospital care. But few commercial insurance companies have as yet caught up with Blue Cross in this regard, and the record shows that the non-profit Blue Cross enterprise has always been able to offer its comprehensive coverage at rates substantially lower than the premiums commercial carriers often charge for insurance policies which are far less comprehensive in scope or extent.

However, now that the Richmond Plan's Contract might once again be broadened in inclusiveness, and the subscription charges go up commensurately, the Plan is also proposing to offer an optional "$50 Deductible" rider for the improved Standard Contract—to make available rates which are lower than the rates Blue Cross subscribers are paying now. It is only to a certain extent—actually only to the fixed and known-in-advance extent of $50—that the Plan is deviating from the Blue Cross policy of providing for paid-in-full hospital services. After the subscriber has paid the first $50 of hospital charges, he has available to him, as his condition may require, up to a total of sixty days in a semi-private room at no additional cost for that hospital confinement. Also, all of the "extra" hospital services will be covered in full. There will be no element of unanticipated hospital expense; there will be no dollar limitation to the benefits of the ridered Contract once the "deductible" is paid—no co-insurance that might make financial worries complicate a case or might deter the physician from making sure his patient receives every hospital service that is needed.

Evn though characterized by the "deductible" feature, when this ridered Contract is compared with other offerings in the health insurance field it will be found to be among the best. Blue Cross people firmly believe that, in matters of health, only the best is good enough.

Though a non-profit public service enterprise, Blue Cross is not a monopoly. Its comprehensive-type of Contracts are in competition with the partial prepayment policies that are being marketed by over 900 insurance companies. However, the Virginia public's confidence in the local Blue Cross Plans, and the public's appreciation of their "full-service" coverage of health care needs, is incontrovertibly demonstrated by the increase in Blue Cross enrollment in Virginia from zero in 1935 to over

745,000 today. The public has always welcomed expansion of Blue Cross service benefits, and it therefore behooves Blue Cross to resist any efforts that might be made to exclude any established hospital service from the Blue Cross program. But few, if any, Blue Cross subscribers would applaud a decision which would reduce their rates by reducing their ability to obtain the kind of hospital service they need when they are sick.

There follows a comparison of the benefits of the proposed, revised Standard Contract (Richmond) with the benefits currently provided for:

	Proposed Provisions	*Present Provisions*
1.	Up to 60 days, which may be used in one stay or several stays, will be available beginning with the first year of the Contract's effectiveness. Ninety days after discharge, benefits are renewed to provide for another 60 days of care.	Thirty days only during first year. Sixty days per year during the second and subsequent years.
2.	Up to 60 days per confinement (as described above) for nervous and mental conditions and tuberculous conditions.	Ten days per year for nervous and mental and tuberculous conditions.
3.	For delivery cases without complications, up to 7 days. For complicated delivery cases, up to 60 days per confinement (as described above).	Eight days for all delivery stays.
4.	Premature delivery, miscarriage, or other complications of pregnancy which occur during the initial 10 months of the Contract's effectiveness will be provided for if termination of the pregnancy would have normally occurred after completion of the 10-month waiting period.	Not covered.
5.	Full Contract services and days for normal, sick, or premature newborn infants from birth, if their delivery services are provided by the Contract.	Not covered except for ordinary nursing care of normal newborn infants, limited to duration of delivery stay of mother.
6.	Full Contract services in all Blue Cross Hospitals regardless of location.	Full Contract services in VHSA Member Hospitals. In other Blue Cross Hospitals, Contract provides for services of the Plan with which hospital is participating.
7.	In accident and minor surgery cases, follow-up out-patient services and necessary hospital services will be provided for.	Only initial treatment covered in accident and minor surgery cases.
8.	Electroencephalograms will be added to hospital ancillary services available.	Electroencephalograms not included.
9.	For Members hospitalized in Non-Blue Cross Hospitals, allowance of $6.50 per day for room and board with up to $100 for other hospital services will be provided for the number of days as outlined in Paragraph 1 above. (Up to $146.50 for 7-day stay.)	Room and board maximum—$8.00 per day. $25.00 for a one-day stay; $30.00 for a two-day stay; $40.00 for a three-day stay; $8.00 per day for the 4th through the 12th day; $7.00 per day for the 13th through 29th day; $6.50 per day for the 30th through 40th day; $6.00 per day for the 41st through 60th day. (Up to $72.00 for 7-day stay.)
10.	Up to $20.00 for out-patient care for accident and minor surgery cases in non-Blue Cross Hospitals.	Up to $15.00 for out-patient care for accident and minor surgery cases in non-Blue Cross Hospitals.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Diagnostic Radiation in a Radiation-Conscious World

More and more persons have become frightened by scare headlines regarding x-ray and are refusing dental, chest and other x-ray examinations. It is the duty of the physician to make them understand the value and importance of radiation as well as ways and means of avoiding possible harmful effects. There are certain questions that may be asked:

1. Is the examination necessary?
2. What physician has been selected to make the examination?
3. Has this physician, if other than a radiologist, been properly trained in radiology? Will his report be acceptable to other physicians?
4. Has the assisting technician received formal radiologic training? Has he been certified?

X-ray can play an important part in diagnosis and nobody wants to do away with the diagnostic assistance afforded by x-ray. It is the unnecessary examination that should be eliminated and the examination that might be done by persons poorly qualified or untrained, and members of the cults. It is necessary for the roentgenologist to provide protection to the patients, himself, his personnel, and to those working in offices adjacent to x-ray equipment. Routine fluoroscopy of infants and children and routine x-ray pelvimetric examination of pregnant women are condemned and should be used only when the need is urgently indicated. Most of the good advice that is being offered today to protect patients from unwarranted exposures during x-ray diagnosis has been available for many years.

There has been distortion and misplaced emphasis regarding the extent of hazards in medical radiation and, at the same time, there has been some excellent and reasonable advice given on certain radiation problems. Some of the facts are:

1. Radiation hazards are real.
2. Dosage should be kept low.
3. Education and experience are essential to appraise the need of exposure and to control the dose.
4. Techniques have been improved to reduce radiation hazards.
5. The geneticists estimate that the lowest doses have some genetic effect.
6. Infants, children, and pregnant women should have more protection against radiation than older individuals.
7. The increased uses of radiation in medicine call for some public as well as personal concern.
8. Exposure to medical and dental radiation can be reduced without reducing the use of radiation for diagnostic and therapeutic purposes.

Radiologists and their associates who adhere to protective practices need have no excessive concern for their own longevity or injury. The individual who has wisdom, experience, and common sense will protect his patients and himself. The x-ray machine should be tested periodically for leakages and output. Unnecessary radiation in diagnosis should be filtered out. The technique of higher kilovoltage with lower milliamperes per second produces equivalent diagnostic x-ray films with less radiation for the patients. The use of active chemicals and proper temperature in developing films will eliminate unnecessary repeat films. The fluoroscope should not be used in screening, only to observe motion and function. Duration of exposure may be shortened if the radiologist adapts his eyes to darkness for 20 minutes before making the fluoroscopic study. He should always protect himself with adequate covering and gloves. His equipment should have effective shutters for reducing to a minimum that part of the patient's anatomy under study. In making x-ray films, field-limiting cones and diaphragms should be used as much as possible.

Studies have been made in which measurements were made of the amounts of radiation received by patients during diagnostic procedures. It was found that most patients were exposed to insignificant amounts of radiation. The exceptions were cases of unusual sensitivity, repeated serial examinations, and diagnostic procedures superimposed upon roentgenotherapy. It can be affirmed that necessary examinations, performed by a properly trained physician who uses equipment designed to minimize exposure, are not perilous. Physicians of today are called upon to give their patients a sense of proportion in this increasingly radiation-conscious world.

Ref. "Radiological Health," Public Health Reports, 72: 12, (Dec.) 1957.

Mental Health . . . .

JOSEPH R. BLALOCK, M.D.

The Function of the R. Finley Gayle Observation and Treatment Center

The Virginia Code provides that "no person shall, while he is insane, be tried for a criminal offense." The Code, when the question of sanity is raised, goes on to state, "If, prior to the time for trial of any person charged with crime, either the court or attorney for the Commonwealth has reason to believe that such person is in such mental condition that his confinement in a hospital for the insane or a colony for the feeble-minded is necessary for proper care and observation, the court or the judge thereof may, after hearing evidence on the subject, commit such person, if a white person, to any State hospital for the insane best adapted to meet the needs of the case, pending the determination of his mental condition." This section goes on to elaborate further providing for return of accused from hospital when sane or restored to sanity among other details.

The completion of the R. Finley Gayle Observation and Treatment Center at Southwestern State Hospital is of interest to the medical profession. It represents the latest provisions in the State for the care and treatment of mentally ill patients who commit crimes, and some general statements as to its purpose and some orienting remarks concerning the problem of the so-called criminally insane seem appropriate.

Approximately one-hundred patients are sent to us each year by the Courts for study and report. The decision of the Courts to order this report is usually based on some features in the case that give rise to the question of mental condition. The patient may be frankly psychotic, and there may be virtually no question concerning the presence of a mental illness of serious degree. These cases are by far in the minority. In some of these, excellent results from treatment may be expected, and in others, such as the chronic schizophrenic reactions, the outlook is poor. This is one of the three groups into which these patients fall: namely, the frankly psychotic, those who are not mentally ill, and then the rather large group presenting features in the history or mental picture or both that require evaluation from the standpoint of responsibility and ability to stand trial.

At this point the routine procedure that is followed in all cases coming to us for observation and treatment might be outlined. At the time of admission a careful admission note is made before the patient is sent over to the ward. The social worker proceeds to write to various sources for information in an effort to build up an accurate and full history. These sources will include the Court, family, hospitals, physicians, employers, and others. The relatives are asked to come in and give us a history, and, if this is not practical, to fill out a questionnaire. The Department of Public Welfare and the probation and parole officers are most helpful in providing history. Careful physical and neurological examinations are made. Other examinations include a complete blood count, urinalysis, dental examination, x-ray of skull and chest as a routine and usually spinal fluid examination. Also electroencephalogram readings are made upon all these patients. On the wards they are placed under observation, seen frequently by the physician who carries out a mental examination and institutes the indicated treatment. A most important part of the examinations is that of the psychologist. This provides us the intellectual level of a patient, but in addition with the newer methods of psychological approach, such as the Rorschach, the psychologist is able to give us a very definite addition to the understanding of the type of thinking indulged in by the patient, giving leads as to organic brain change, to schizophrenic features, contact with reality, deterioration, malingering, etc. As soon as all examinations are completed and after an adequate period of observation has elapsed, the patient is brought up before staff meeting. In many instances there are several staff meetings for there may very well be changes in the mental picture with the passage of time and a frank mental illness may be present on admission that will become ameliorated and recovery may ensue. Our reports to the Court are as a rule rather simply phrased and refer to the condition of the patient from the time of entering the hospital and do not ordinarily include any commitment as to the condi-

Joseph R. Blalock, M.D., *Superintendent, Southwestern State Hospital, Marion, Virginia.*

Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

tion of the patient at the time of the crime. Weeks may have been passed between the time of the crime and admission to the hospital. Quite often with the passage of time and change in the picture subsequent reports became necessary. A man may have been reported as psychotic or insane, and a subsequent report may be submitted that he is recovered. The decision as to recovery from a psychosis is often difficult, and it is felt wise to go rather slowly in arriving at a decision that a person is recovered. It is felt that the passage of time and maintenance of apparent recovery will enable us to furnish to ourselves and to the Court greater assurance that recurrence or an early recurrence is unlikely.

The so-called intermediate group offers the greatest challenge and certainly presents a number of difficult problems for evaluation, particularly from the standpoint of mental responsibility. Into this group would fall the personality disturbances, such as the sociopathic personality disturbances, the personality pattern and personality trait disturbances, some of the schizoid personalities and simple schizophrenics, the higher grades of mental deficiency, the epileptic, particularly the epileptic equivalents, those with history of head injury, those with arteriosclerotic and senile mental disorders, and the psychoneuroses.

Those who are found psychotic and remain on until recovery constitute the more predominant population of the criminal insane buildings, but it should be emphasized that the term "criminal insane" is a misnomer. These individuals are all suffering from one or other of the forms of mental illness that are described in the standard psychiatric text books. Most of them are not dangerous. It so happens that each of them have broken the law, perhaps as a direct outcome of the disordered mental state. Many of them make the best hospital citizens. A patient with mental subnormality of such a degree as not to be responsible may have created some minor disturbance and been sent to us, and with us he would be apt to remain because there would be no likelihood of his intellectual level improving to the point of responsibility. There are, however, enough patients in the so-called criminal insane population of any state to necessitate either special buildings such as we have in Virginia and neighboring states or to necessitate the building of separate hospitals in states with larger populations, such as New York and California. There are enough potentially dangerous patients to have made it indeed imperative that these hospitals possess special security features. At the same time every effort is made to run these hospitals as hospitals and at the same time meet the requirements of security. The R. Finley Gayle Observation and Treatment Center, as the name implies, intends so far as possible to meet the psychiatric and scientific objectives of careful observation and psychiatric treatment and at the same time offer the needed security. The Center is comprised of eight wards. In addition there is a twelve-bed medical section with diet kitchen, hydrotherapy, physiotherapy, and dental office. There is a 500 capacity auditorium with facilities for gymnasium, for gatherings, and for dramatics. There is adequate space provided for occupational therapy and industrial therapy, and as time goes along we hope that sufficient personnel will be provided to exploit adequately these facilities.

Monthly Report of Bureau of Communicable Disease Control

	Feb. 1958	Feb. 1957	Jan.-Feb. 1958	Jan.-Feb. 1957
Brucellosis	1	3	1	3
Diphtheria	0	0	5	0
Hepatitis	27	51	56	82
Measles	1107	417	1541	728
Meningococcal Infections	10	4	20	13
Meningitis (Other)	19	9	36	29
Poliomyelitis	1	2	1	3
Rabies (In Animals)	39	28	82	58
Rocky Mt. Spotted Fever	0	0	0	0
Streptococcal Infections	757	664	1286	1094
Tularemia	10	4	18	13
Typhoid Fever	1	4	5	8

Miscellaneous . . .

Principles of Medical Ethics.

This is the third of the series of "Principles of Medical Ethics", the first appearing in the March issue. Each section will be reviewed, accompanied by a detailed explanation from the Judicial Council of the American Medical Association.

SECTION 2

Physicians should strive continually to improve medical knowledge and skill, and should make available to their patients and colleagues the benefits of their professional attainments.

TRADITIONAL CONCEPTS INCLUDED WITHIN SECTION 2

The Judicial Council is of the opinion that Section 2 of the Principles of Medical Ethics, 1957, embraces the spirit and intent of several sections of the 1955 edition of the Principles including Chapter I, Section 2 (The Physician's Responsibility), Chapter I, Section 7 (Patents and Copyrights) and Chapter I, Section 10 (Secret Remedies). These sections are reproduced below as guides in the interpretation of Section 2.

Chapter I, Section 2 (The Physician's Responsibility) 1955 edition of the Principles of Medical Ethics:

> The avowed objective of the profession of medicine is the common good of mankind. Physicians faithful to the ancient tenets of this profession are ever cognizant of the fact that they are trustees of medical knowledge and skill and that they must dispense the benefits of their special attainments in medicine to all who need them. Physicians dedicate their lives to the alleviation of suffering, to the enhancement and prolongation of life, and to the destinies of humanity. They share whatever they have learned and whatever they may discover with their colleagues in every part of the globe. They recognize instinctively that the need for improvement of medical knowledge and skills is never at an end, and while they strive toward satisfaction of this need they are zealous in making available to physicians of good character who possess the desire and the ability to learn the aggregate of progress in medical education, research, and discoveries as they may exist at the time. They do not remain content to limit their activities to the care of the infirm, since they recognize also their useful rank among the vast concourse of citizens on whose shoulders the destiny of our nation rests. At the same time they will resist attempts to debase their services by diverting them to ignoble purposes. In their relationships with patients, with colleagues, and with the public, they maintain under God, as they have down the ages, the most inflexible standards of personal honor.

Chapter I, Section 7 (Patents and Copyrights) 1955 edition of the Principles of Medical Ethics:

> A Physician may patent surgical instruments, appliances, and medicines or copyright publications, methods, and procedures. The use of such patents or copyrights or the receipt of remuneration from them which retards or inhibits research or restricts the benefits derivable therefrom is unethical.

Chapter I, Section 10 (Secret Remedies) 1955 edition of the Principles of Medical Ethics:

> The prescription or dispensing by a physician of secret medicines, or other secret remedial agents, of which he does not know the composition, or the manufacture or promotion of their use is unethical.

ANNOTATIONS TO SECTION 2 OPINIONS AND REPORTS OF THE JUDICIAL COUNCIL

The following are excerpts from Reports and Opinions of the Judicial Council which are applicable in interpreting Section 2.

Experimentation

This report concerns the report made by Dr. A. C. Ivy, who was sent to Europe as representative of the United States Government to review the war crimes of a medical nature committed by the Germans, which report was referred to the Judicial Council.

The Council finds that the experiments described in Dr. Ivy's report are absolutely opposed to the Principles of Medical Ethics of the American Medical Association and are to be condemned. In order

to conform to the ethics of the American Medical Association, three requirements must be satisfied: (1) the voluntary consent of the person on whom the experiment is to be performed; (2) the danger of each experiment must be previously investigated by animal experimentation, and (3) the experiment must be performed under medical protection and management. (*1946 Report*)

New Drugs or Procedures

In order to conform to the Principles of Medical Ethics of the American Medical Association, three requirements must be satisfied: (1) The voluntary consent of the person on whom the experiment is to be performed must be obtained. (2) The danger of each experiment must have been investigated previously by means of animal experimentation. (3) The experiment must be performed under proper medical protection and management. (*JAMA, March 30, 1957*)

Patent for Surgical or Diagnostic Instrument

It is not unethical for a physician to patent a surgical or diagnostic instrument he has discovered or developed. Our laws governing patents are based on the sound doctrine that one is entitled to protect his discovery. Medicine, recognizing the validity of our patent law system, accepts it, but in the interest of the public welfare and the dignity of the profession insists that once a patent is obtained by a physician for his own protection, the physician may not ethically use his patent right to retard or inhibit research or to restrict the benefit derivable from the patented article. Any physician who obtains a patent and uses it for his own aggrandizement or financial interest, to the detriment of the profession or the public is acting unethically. (*JAMA, March 30, 1957*).

SECTION 3

A physician should practice a method of healing founded on a scientific basis; and he should not voluntarily associate professionally with anyone who violates this principle.

TRADITIONAL CONCEPTS INCLUDED WITHIN SECTION 3

The Judicial Council is of the opinion that Section 3 of the Principles of Medical Ethics, 1957, includes the spirit and intent of several sections of the 1955 edition of the Principles including Chapter II, Section 1 (Standards, Usefulness, Nonsectarianism) of the 1955 edition of the Principles. This section is reproduced below as a guide in the interpretation of Section 3.

Chapter II, Section 1 (Standards, Usefulness, Nonsectarianism) 1955 edition of the Principles of Medical Ethics:

> In order that a physician may best serve his patients he is expected to exalt the standards of his profession and to extend its sphere of usefulness. To the same end, he should not base his practice on an exclusive dogma, or a sectarian system, for "sects are implacable despots; to accept their thralldom is to take away all liberty from one's action and thought." A sectarian or cultist as applied to medicine is one who alleges to follow or in his practice follows a dogma, tenet or principle based on the authority of its promulgator to the exclusion of demonstration and scientific experience. All voluntarily associated activities with cultists are unethical. A consultation with a cultist is a futile gesture if the cultist is assumed to have the same high grade of knowledge, training, and experience as is possessed by the doctor of medicine. Such consultation lowers the honor and dignity of the profession in the same degree in which it elevates the honor and dignity of those who are irregular in training and practice.

ANNOTATIONS TO SECTION 3 OPINIONS AND REPORTS OF THE JUDICIAL COUNCIL

The following are excerpts from Reports and Opinions of the Judicial Council which are applicable in interpreting Section 3.

Relationships with Cultists

Inquiry was made of the right of a county medical society to withhold membership or to withdraw the privileges of membership from a registered physician who graduated from an osteopathic school. This inquiry came from Texas where a diploma from a high grade osteopathic school entitles the holder thereof to take the examination by the state board of medical examiners for a license to practice medicine. The graduate of the osteopathic school who passes the examination successfully is granted the same kind of license to practice medicine as that granted to a graduate of a reputable medical school. The Judicial Council is of the opinion that a legally registered physician who has complied with the re-

quirements of the law in securing a license by the state to practice medicine and who, having secured such license, has not practiced or claimed to practice sectarian medicine, but has conformed to the requirements of the Principles of Medical Ethics of the American Medical Association, and who has been accepted into membership in a county medical society, cannot be expelled therefrom without cause.

The board of any hospital (not maintained by general taxation) has the legal right for reasons sufficient to the board to refuse the privileges of the hospital at any time to any practitioner regardless of his so-called school of practice. The fact that the person applying for permission to bring to and treat in the hospital a particular patient is licensed by the state to practice does not alter the situation. The medical staff of a hospital likewise has the moral right to refuse to accept as an associate any person whom the staff may consider objectionable for reasons sufficient to the staff, and should insist on maintaining that right. (*1923 Report*)

Defining "Sectarian"

A "sectarian," as applied to medicine, is one who in his practice follows a dogma, tenet or principle based on the authority of its promulgator to the exclusion of demonstration and experience. (*1924 Report*)

Defining "Physician"

A physician is one who has acquired a contemporary education in the fundamental and special sciences, comprehended in the general term "medicine" used in its unrestricted sense, and who has received the degree of Doctor of Medicine from a medical school of recognized standing. (*1924 Report*)

The Relationships of Physicians and Cultists

Communications to the Council have raised questions as to the relationships of physicians with cultists—the attitude that should be assumed by the physician called into a case under treatment by a cult practitioner—whether a pathologist in a hospital under the direction of regular physicians should refuse to examine material submitted by a cultist—and other questions of more or less similar nature. In the opinion of the Judicial Council, these are questions that are not sharply to be defined by words. In his relations with irregular practitioners, the physician should be bound by the Principles of Medical Ethics. In such matters the policy must be governed largely by the circumstances governing the individual case; by the conditions existing in the special community; and by the realization that the first duties of the physician are the care of the sick and, at the same time, the upholding of the dignity and honor of the profession. (*1924 Report*)

Cult Practitioners

The Council has emphasized the importance of maintaining the dignity of medicine and of upholding the soundness of the teachings of scientific medicine as opposed to the fallacies of sectarianism. Either the theories and practices of scientific medicine are right and those of the cultists are wrong, or the theories and practices of the cultists are right and those of scientific medicine are wrong. The physician who maintains professional relations with cult practitioners would seem to exhibit a lack of faith in the correctness and efficacy of scientific medicine and to admit that there is merit in the methods of the cult practitioners. (*1933 Report*)

Association with Cultists

The profession of medicine is the custodian of the accumulated knowledge in medicine which should be used for the benefits of humanity. This knowledge, technical in nature and developed by experience, can be interpreted to the body of the people only by persons educated to understand it and trained to apply it. Of all those professing to heal the sick only the doctor of medicine has sufficient education and training to make use of the information already accumulated and keep abreast of that being developed continuously. We grant that even though this is true no one is compelled to choose only from this group in selecting his medical attendants. The individual may elect to receive his medical care from himself, his neighbor, osteopathy, chiropractic, naturopathy or Christian Science, but he is not entitled while under the care of such irregulars to demand that the man educated in scientific medicine furnish opinion and advice to one so far deficient in education that he cannot so understand and apply that opinion and advice as to be able to make satisfactory use of it. (*1936 and 1945 Reports*)

Teaching in Schools of Chiropody or Podiatry

The Council is of the opinion that the practice of chiropody is not a cult practice as is osteopathy, chiropractic or Christian Science, which have bases of treatment not supported by scientific or demonstrated knowledge but on which bases all diseases are treated. Chiropody is rather a practice ancillary —a hand maiden—to medical practice in a limited

field considered not important enough for a doctor of medicine to attend and therefore too often neglected. The Council can see no reason to declare the teaching of chiropodists by members of this organization to be unethical, provided the schools in which they teach are connected with approved schools of medicine and recognized standards of pre-medical education are required. (*1939 Report*)

Physicians and Cultists

Some of our members are giving lectures in osteopathic and optometric schools and addresses before their societies. Some members are associated by a common waiting room in offices with them. Some members are by mutual agreement professional associates principally in the field of surgery. All of these voluntarily associated activities are unethical. In case of emergency no doctor should refuse a sufferer knowledge or skill which he possesses to the sufferer's harm but this is quite a different matter from that of a consultant or practitioner who by consulting or practicing with him assists a cultist to establish himself as competent and on the same basis of medical knowledge as a doctor of medicine. Teaching in cultist schools and addressing societies is reprehensible, for such activities give public approval by the medical profession to a system of healing known to the profession to be substandard, incorrect and harmful to the people because of its deficiencies. (*1938 and 1945 Reports*)

Osteopathy

In the absence of a directive from the House of Delegates, and in the absence of any alternative statement from the osteopaths themselves that they no longer adhere to their original cult theories, the Judicial Council reasserts its opinion that all voluntary associations with osteopaths are unethical (*1952 Report*)

Optometry

Resolution No. 77, adopted by the House of Delegates in June, 1955, provides that "it is unethical for any doctor of medicine to teach in any school or college of optometry, or to lecture to any optometric organization, or to contribute scientific material to the optometric literature, or in any way to impart technical medical knowledge to nonmedical practitioners." The Judicial Council believes that this statement requires no clarification with the possible exception of the words "nonmedical practitioners." The Council is of the opinion that this phrase applies only to optometrists and does not include nurses, technicians, or other personnel working with doctors of medicine in the conduct of their professional activities.

For more than 30 years, the matter of relationship between doctors of medicine and optometrists has been before the House of Delegates. Specific action was taken in 1934, 1936, 1950, 1951 and 1955. The position of the Association during most of that period has been that voluntary associations with optometrists are unethical. A partial exception was made to that policy by action of the House of Delegates in 1950 when lectures, etc., to "nonmedical groups" were permitted if they were designed to prevent blindness. Nevertheless, the 1955 action rescinds the 1950 resolution.

At no time have optometrists been officially declared sectarian or cult practitioners. Indeed, it may be doubted that optometry is a sectarian practice comparable to osteopathy, chiropractic, or naturopathy. Optometry is a licensed occupation under most, if not all, state laws. Its function is to determine mechanical defects of the eye and to correct them by the prescription of proper lenses. Optometrists are neither qualified nor licensed to do more than ascertain if mechanical defects exist and to correct them when necessary.

Resolution No. 77 provides that association between doctors of medicine and optometrists are unethical. Thus, the House has reaffirmed that it is a futile gesture to consult on a professional level with one who does not possess the same knowledge, training, experience, and ideals as the doctor of medicine.

Unless directed by the House of Delegates to the contrary, the Council will assume that the proscriptions contained in Resolution No. 77 apply to *voluntary* associations between doctors of medicine and optometrists and do not proscribe as unethical those associations that are required by law or regulations of the state. (*1955 Report*)

Osteopathy

Only the House of Delegates can alter policy and until the House is convinced that osteopathy is no longer a sectarian practice and so votes, it is incumbent on the members of the Association to observe existing policy.

The ethical proscriptions against voluntary associations with cultists must be construed strictly. When such an association is required by law or regulation of the state it can in no sense be considered voluntary and, therefore, is not unethical. (*1955 Report*)

Osteopath Acting as an Anesthesiologist

For years, the Association has stated that voluntary professional activities with sectarian practitioners are unethical. In its 1955 Report, which was accepted by the House of Delegates, the Council reaffimed its opinion that all voluntary professional associations with osteopaths are unethical. (*JAMA, March 30, 1957*)

Serving on State Sanity Commission with Osteopath

The Principles of Medical Ethics proscribe voluntary professional associations between doctors of medicine and cultists. Associations that are required by law or are occasioned by judicial appointment, made in the public interest, cannot be considered to be voluntary and thus are not in contravention of the Principles. (*JAMA, March 30, 1957*)

Lecturing to Osteopathic Association

The Principles of Medical Ethics proscribe all voluntary professional associations between doctors of medicine and sectarian or cult practitioners. The giving of a medical paper by a doctor of medicine before a group of osteopathic physicians by invitation would be voluntary professional association contrary to the Principles of Medical Ethics. (*JAMA, March 30, 1957*)

"Peace of Mind" Drug Classification

Some drugs may be called tranquilizers or "peace of mind" agents, but they're causing the American Medical Association drug classifiers a lot of confusion.

The A.M.A. Council on Drugs annually publishes "New and Nonofficial Drugs," a book which contains evaluations of new drugs. For the 52nd edition, now available to the nation's practicing physicians, the council set up a whole new system of classifying the so-called "peace of mind" drugs.

As the new drugs appeared, they were evaluated individually on the basis of scientific data and from reports of investigations. They were grouped under the general heading "ataraxics," a Greek derivative meaning "peace of mind."

However, the drugs have become so numerous and the situation so complex that this simple classification is no longer workable. But the new one in the 1958 "New and Nonofficial Drugs" is a complicated one, according to the council announcement in the March 1st Journal of the American Medical Association. The "peace of mind" drugs will now be classified according to their effect on the central nervous system.

The increasing number of such drugs is creating a difficult situation for the average physician. "He is confronted with the problem of evaluating claims of usefulness for a wide variety of chemical substances with diverse pharmacological effects, which are proposed for the treatment of neurotic and psychic disorders."

The council feels that the present confusion was created by the introduction of certain drugs for the treatment of psychic disorders merely because they possessed unique pharmacological properties. Among the variety of terms confronting the doctor today are: tranquilizer, normalizer, calmative, neurosedative, psychic energizer, and pacific.

These terms are commonly used in referring to the human mental state and are more or less synonymous with "peace of mind." As such, they are psychological rather than pharmacological terms, since an improved mental state can be produced by a multitude of drugs which either depress or stimulate the central nervous system.

The new terms to describe meprobamate, chlorpromazine, and rauwolfia will now be "central muscle relaxant (skeletal muscle relaxant), sedative;" "central sympathetic suppressant, phenothiazine derivative," and "central sympathetic suppressant, rauwolfia derivative."

"Regardless of terminology; the ideal objective of psychotherapy with drugs is to induce an improved mental state."

While the new classification system is designed to clarify the present picture, it is believed to be only a stop-gap measure. According to the council, "It appears probable that the gradually increasing number of new drugs, as well as new terms, will add to rather than detract from the confusion in this important field."

Book Announcements . . . .

Books received for review are promptly acknowledged in this column. In most cases, reviews will be published shortly after the acknowledgement of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

Heart Disease. Cause, Prevention and Recovery. By PHILIP S. CHEN, Ph.D., Professor of Chemistry and Chairman of Division of Natural Sciences, Atlantic Union College. With the assistance on Part I of Philip S. Chen, Jr., Ph.D., National Heart Institute. The Chemical Elements. South Lancaster, Massachusetts. 1958. 189 pages. Illustrated. Price $3.00.

Diabetes As A Way of Life. By T. S. DANOWSKI, M.D., Renziehausen Professor of Research Medicine, University of Pittsburgh School of Medicine; Senior Staff Physician at Presbyterian-Woman's, Children's, Elizabeth Steel Magee and Shadyside Hospitals of Pittsburgh; etc. Coward-McCann, Inc., New York. 1957. 177 pages. Price $3.50.

Therapeutic Heat. Edited by Signey Licht, M.D., Honorary Member, British Association of Physical Medicine, Danish Society of Physical Medicine, and the French National Society of Physical Medicine. Elizabeth Licht, Publisher, New Haven, Conn. 1958. xiii-466 pages. Price $12.00.

Atomic Energy In Medicine. By K. E. HALNAN. Philosophical Library, New York. 1957. ix-157 pages. Cloth. Price $6.00.

The Atoms for Peace Series is intended for the educated layman and not for a specialist in the field in question. However, Atomic Energy in Medicine is written so skillfully by an eminent English scholar and physician, that this rather readable book is valuable not only for persons with limited knowledge of physics and medicine, but on account of its excellent and understandable presentation of most difficult material it must be recommended highly for the library of any physician, who has had no recent training in the use of radioactive isotopes in medicine. The book covers not only the use of radioactive material in medical research, in therapy and in diagnostics, but also the use of high energy particles. Atom physics and the nuclear reactor techniques are discussed as well as the problems and hazards of atomic radiation.

ERNST FISCHER, M.D.

Methodology of the Study of Ageing. Volume 3, Ciba Foundation Colloquia on Ageing. Editors for the Ciba Foundation, G. E. W. Wolstenholme, O.B.D., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc. Little, Brown and Company, Boston. 1957. x-202 pages. With 47 illustrations. Cloth. Price $6.50.

As in most Ciba colloquia, the main profit the reader gains is from the published discussions by the prominent participants in the field in question, since most of the material contained in the formal papers has been published elsewhere. It becomes very obvious from reading this little, but interesting, book, that we have made nearly no inroad into the intrinsic mechanisms of the ageing process. The main difficulty arises from the fact that the biological and psychological reactions of an organism at a certain age, are only partly dependent on age, but very much determined by heredity and by previously prevailing conditions, including diseases. Since with the length of life, the chance for variation of these influencing conditions increases, the establishment of what is due to ageing *per se* becomes rather intricate. The range covered in this symposium extend from the ageing of single cell organisms to the changes in human organ function and in human performance with age.

ERNST FISCHER, M.D.

Selected Writings of Walter E. Dandy. Compiled by Charles E. Troland, M.D., and Frank J. Otenasek, M.D. Charles C. Thomas, Springfield, Illinois. 1957. vii-789 pages. Illustrated. Cloth. Price $15.00.

This valuable collection of scientific treatises by one of the great pioneers of Neurological Surgery is interesting both as a historical development of Neurological Surgery with the papers listed chronologically as they were presented by Dr. Dandy and as a source book for the surgeon because of the availability of surgical procedures as well as hospital care. Historically, Dr. Dandy's description of the development of ventriculography is one of the greatest milestones of the entire field of Neurological Surgery in addition to his studies of the cause of hydrocephalus and the treatments tried for this disorder. The surgical technique described for section of the eighth nerve, for the eighth nerve tumors, for pineal tumors, and for intracranial aneurysms are only a few of the descriptions which are instructive for all who would attack these problems.

These authors have compiled a book which will always remain one of the landmarks in the history of Neurological Surgery just as Dr. Dandy will always be remembered as one of the great leaders in both the surgery and the physiology of the nervous system.

JOSEPH F. KELL, JR., M.D.

The Medical Society of Virginia

Council Minutes

The meeting of the Council of The Medical Society of Virginia was called to order by Dr. Harry C. Bates, Jr., President, at 1:00 p.m. on February 12, 1958, at Society Headquarters. Attending were Dr. Walter P. Adams, Dr. J. R. B. Hutchinson, Dr. Harry J. Warthen, Dr. John T. Hundley, Dr. Mack I. Shanholtz, Dr. Sheppard K. Ames, Dr. Benjamin W. Rawles, Jr., Dr. Fletcher J. Wright, Jr., Dr. Louis P. Bailey, Dr. Alexander McCausland, Dr. Harold W. Miller, Dr. David W. Scott, Jr., and Dr. James P. Williams. Also present were Dr. K. D. Graves, Secretary of the State Board of Medical Examiners, and Mr. Robert C. Duval, Jr., attorney for the Society.

Dr. Bates introduced Mr. Robert Tracy and Mr. Myron Macht, New York, representing the Cornell University Crash Injury Research Project. Mr. Tracy advised Council of a proposed change in policy which would make coded crash data available to auto manufacturers upon request. The Medical Society of Virginia has cooperated with the Crash Injury Project almost since its very beginning and Cornell feels it must have the Society's approval before making this coded data available to the automotive industry. Mr. Tracy explained that the manufacturers have the equipment to do a quicker and more thorough job of culling out the information which they need for engineering purposes. It was also explained that no names or locations will be sent to the manufacturers and the records will contain only facts relative to the accidents themselves. It was then moved and seconded that the change in policy be approved. The motion was adopted.

Dr. Maynard P. Smith and Dr. Emanuel E. Wallerstein, Richmond, were then introduced. Dr. Wallerstein explained that the Virginia Society of Ophthalmology and Otolaryngology was quite anxious to effect a closer liaison with The Medical Society of Virginia. It was brought out that many matters of vital concern to the specialty groups reach them only indirectly. With legislation presenting more and more of a problem, it is becoming quite necessary that the various specialty groups have a closer tie with the State Society. Dr. Smith was hopeful the specialty groups might be permitted to be represented officially in the House of Delegates. It was pointed out, however, that our Constitution and By-Laws do not permit this at the present time. Dr. Smith was advised it would be perfectly all right for the specialty groups to have observers attend the meetings of the House and to report back on the transactions.

Dr. Adams mentioned the possibility of appointing a member of the Society of O.L.&O. to the Legislative Committee next year. This might well be considered since the group is vitally concerned with legislative matters at this time. It was also suggested that the specialty groups bring their problems to the Council at any time and request assistance whenever needed. It was also requested that the State Office be kept advised of any matters of concern to the profession.

Considered next was a report from the Insurance Committee recommending the adoption of a proposal for major hospital and business expense coverage at the State level. The proposal had been submitted by the American Casualty Company through Mr. David Dyer, Roanoke. It was brought out that over 800 physicians had replied to a questionnaire sent out by the Committee, and the response was overwhelmingly in favor of such group coverage. Council was told the proposed plan was of the $500 deductible type with a ceiling of $10,000. Considered of primary importance was the fact that the plan would take care of 75 per cent of the cost for nursing services.

During the ensuing discussion the question was raised as to whether or not a major hospital plan offered by Blue Cross might not be the best answer. Several were of the opinion that Blue Cross could draw up a special plan which would include nursing services. It was also thought that the Medical Society should not select a plan without first giving Blue Cross the opportunity to submit a competitive proposal. It was mentioned Blue Cross had received very little notice of the Committee's last meeting. There also existed some thought that the Medical Society should not favor either Blue Cross or the commercial companies, but should insist both be afforded an equal opportunity.

It was then moved that the Committee's recommendation be tabled and the Committee be requested to invite Blue Cross to submit a competitive proposal for consideration. The motion was seconded and adopted.

Dr. Bates reported a great deal of thought had been given to the special meeting of the House of Delegates which must be called to consider the future of Medicare in Virginia. It seemed that an April meeting was desirable and perhaps a Sunday or Wednesday meeting would be most convenient for the majority.

It was the consensus that a Sunday meeting would be most acceptable and the date of April 13 was recommended. A check with the Hotel Jefferson was made and it was learned the Ballroom was available on that date. It was also suggested that a buffet luncheon be served 30 minutes prior to the actual meeting. A motion was introduced which would authorize a special appropriation of $200.00 to cover the cost of the luncheon. The motion was adopted.

Dr. Bates thought perhaps Colonel Earl Lowry should be invited to address the House and to present the government viewpoint. He also expressed the hope that the Committee on Principles and Policies would have ready a set of guiding principles for consideration at that time.

Council was advised by Dr. Graves that an obstetrician was definitely needed on the State Board of Medical Examiners. He brought out the fact that having proper representation of the specialties on the Board is very important when examinations are prepared. It was recommended that, during future meetings of the House of Delegates, the Speaker advise the District concerning what specialties need to be represented on the Board. This would insure a well balanced Board at all times.

Plan for the 1959 Annual Meeting were discussed and it was learned only two dates were available at the Hotel Roanoke. They were October 4-7 and November 15-18. It was reported Williamsburg might possibly be able to accommodate the Society from November through February. However, it would be necessary that the exhibits, banquets, meeting rooms, etc., be located at widely separated points. This was not considered advisable because of the ever present threat of inclement weather. A call was made to the Homestead in Hot Springs and it was learned exhibit facilities were somewhat limited. In addition, serious doubt existed as to whether or not enough rooms would be available to take care of the usual registration.

After careful consideration, it was moved that the meeting be held at the Hotel Roanoke from October 4-7. Although this early date would prevent the usual auditor's report from being ready by the time of the meeting, it was the consensus that a report prepared by Miss Watkins would be sufficient. The Society's books are closed each year on September 30 and the audit begins shortly thereafter.

Mr. Duval than brought Council up-to-date on legislation with medical implications introduced in the General Assembly. He reported he had been advised that a "second injury" bill had been prepared by Dr. Savage and would soon be introduced in the House. However, no definite confirmation of this fact could be obtained. It was then moved and adopted that the Executive Secretary call Dr. Savage and seek to learn what progress had actually been made in getting a "second injury" bill introduced.

Discussed also were bills amending that portion of the Medical Practice Act pertaining to the State Board of Medical Examiners, defining and regulating the practice of Physical Therapy, setting up a commission on aging and amending the Code as it affects the handling and dispensing of drugs.

Mr. Duval reported that as a result of the VALC Study on the regulation of the uses of atomic energy, a resolution had been introduced calling for continuation of the study and discouraging, at this time, any legislation designed to control possible radiation hazards. It was reported the State Department of Health had given much time and thought to a bill designed to establish certain safefuards with reference to radiation hazards, and the resolutions would likely make passage improbable. It was then moved that the VALC be contacted and advised that The Medical Society of Virginia is vitally interested in legislation concerning radiation hazards and would appreciate the opportunity to be heard when such legislation is drawn. The motion was adopted.

Council then learned there existed the possibility that an effort would be made to place milk inspection under the Department of Agriculture. It was the consensus that problems involving milk sanitation should definitely be under the supervision of the Department of Health. It was moved that a resolution adopted by The Medical Society of Virginia in 1956 be reaffirmed and the Governor advised of this action. The motion would also place the Society on record as opposing supervision of health matters by any agency other than the Department of Health. The motion was adopted.

Dr. Rawles offered a resolution commending Mr. Duval for his work with the Legislative Committee and his diligence in following the many bills of interest and concern to the profession. The motion carried.

Attention was called to a Legal Conference to be sponsored by the American Medical Association sometime during May. The Conference will be held in Chicago and medical society attorneys and executive secretaries have been urged to attend. It was brought out that Mr. Duval had attended a similar Conference in 1956 and it was considered quite worthwhile. It was moved and passed that Mr. Duval be authorized to attend the meeting and the necessary funds (same as 1956) be appropriated.

A letter from the Blood Banks Association of New York, Inc., was next read. The letter stated that the American Association of Blood Banks and the Medical Society of New York had established a Northeast Clearing House for distant donor replacement and that financial assistance was needed. It was also stated Virginia is a direct beneficiary of this particular program. It was the consensus that Council needed more detailed information before making a definite decision.

Dr. Bates then read portions of a letter from Dr. John Winebrenner of the UMW Health and Welfare Fund with reference to a resolution adopted by the AMA House of Delegates during its December meeting. The resolution condemned the attitude and method of operation of the Fund and called it damaging to the quality and availability of medical and hospital care to the beneficiaries. Council was advised that Virginia's three delegates to the AMA had voted in favor of the resolution. It was then moved that the Council concur in the stand taken by Virginia's delegates to the AMA and also approve the current practice and procedure of the Society's Liaison Committee to the UMW Health and Welfare Fund in the handling of problems involving the profession and the Fund within the State. The motion passed.

Considered next was a request from the U. S. Chamber of Commerce that the Society seriously considered membership in that organization. The Chamber had pointed out that it had supported the medical profession on numerous occasions and had vigorously opposed all efforts to bring on government medicine. During the ensuing discussion, it was mentioned the Society had belonged to the State Chamber of Commerce for many years. It was then decided the matter should be tabled until the October meeting and that inquiries be made to find how many other state medical societies belong to the U. S. Chamber.

Next on the agenda was the matter of determining a proper rental for those offices in the new Headquarters Building to be occupied by the Virginia Academy of General Practice and the Virginia State Nurses Association. It was reported that comparable facilities in Richmond rent from $3.00 to $3.95 per square foot. The rate depends, in large part, upon whether or not an office is air-conditioned. It was then moved that a base of $3.00 per square foot be used in determining rent for space in the new building. The motion passed.

Dr. Bates advised Council that Society By-Laws provide that a member reaching the age of 70 can, *upon his request,* be exempted from further payment of dues—providing, of course, that he has been a member for 10 years. There was some question as to whether or not members should be advised of this provision or whether it should be left to those eligible to actually request exemption. Council was unanimous in its feeling that members eligible for the exemption should be advised of this right.

Next on the agenda was a suggestion that the Rehabilitation Committee of the Society assume the responsibility of nominating candidates for the annual award to a physician who has contributed most to the physically handicapped. It was believed the nomination should be made in sufficient time for the award to be presented during the Annual Meeting. It was decided that Dr. Rawles should talk with Mr. Kingsley, Chairman of the Governor's Committee on the Employment of the Physically Handicapped, and seek to iron out the necessary details.

Council was advised that Dr. John Hazel, Chairman of the Committee on Federal Medical Services, had attended a special medicare conference in Atlanta during January. The Conference had recommended that all state societies petition the Congress and Secretary of Defense to permit negotiation of indemnity type programs at the time of renewal of medicare contracts. No action was taken on the conference recommendation in view of the special meeting of the House to be held on April 13.

A question was raised concerning whether or not officers of The Medical Society of Virginia should write official letters of congratulations to county health officers competing for public relations awards. It was the consensus that such letters should come from county societies rather than state.

There being no further business, the meeting was adjourned.

ROBERT I. HOWARD
Executive Secretary

APPROVED:
HARRY C. BATES, JR., M.D.
President

Woman's Auxiliary . . .

President — Mrs. John R. St. George, Portsmouth
President-Elect — Mrs. Charles A. Easley, Danville
Vice-Presidents — Mrs. Girard Thompson, Chatham
Mrs. George Brooks, Richmond
Mrs. Robert Detwiler, Arlington
Recording Secretary — Mrs. James Grinels, Richmond
Corresponding Secretary — Mrs. Howard Kruger, Norfolk
Treasurer — Mrs. Wyndham B. Blanton, Jr., Richmond
Publication Chairman — Mrs. Paul Pearson, Warsaw

Auxiliary to the American Medical Association.

The thirty-fifth annual convention of the Woman's Auxiliary to the American Medical Association will be held in San Francisco, June 23-27, 1958, with headquarters at the Hotel Fairmont. Registration will open on Sunday, June 22, and continue through Thursday.

Reservations should be sent to the San Francisco Convention and Visitors Bureau on the form provided for this purpose in the Journal of the American Medical Association. A list of hotels is also contained in the Journal. Because of the difficult housing situation in San Francisco, it is suggested that reservations be made as soon as possible. And please mention the Woman's Auxiliary when you make your request.

Tri-County.

A program on "Camp Easter Seal" was presented by Donald H. Rhodes, Norfolk, to the Auxiliary of the Tri-County Medical Society at a luncheon meeting in February. The meeting was held in Suffolk and the speaker was introduced by Mrs. E. F. Reese, III, Courtland. He told of the rehabilitation work of the Virginia Society of Crippled Children and Adults of which he is a field representative. Colored slides of the camp, near Roanoke, were shown.

Alleghany-Bath.

This Auxiliary held its bi-monthly meeting on January 28th at the C. & O. Hospital, Clifton Forge.

Plans were made to collect samples of drugs to be sent to Sheltering Arms Hospital in Richmond. From the profit realized on the sales on the hospitality cart, a nursing scholarship has been given the C. & O. Hospital. This cart sells toilet articles, etc., to the patients at the Hospital and is a free book and magazine service.

After a delicious luncheon, a film on highway safety was shown.

F. R. Williams

Fairfax.

This Auxiliary met for their February luncheon at the Court House Country Club with the president, Mrs. Andrew Tessitore, presiding. Mr. Paul Hochman, owner of Parties Unlimited in Georgetown, gave an interesting talk on how to give parties for all ages.

In January, Douglas Adams, attorney from Annandale, addressed the Auxiliary on Fairfax County, its history and government. In November, Mrs. Lora Richmond, deputy coordinator of civil defense for the county, was the speaker.

Mrs. T. B. McCord and Mrs. Emmanuel Newman, the first two presidents of this Auxiliary, have been given gold pins for their services. These were presented by Mrs. Thomas E. Haggerty, vice-president. Other officers of the Auxiliary are Mrs. Ardwin Barsanti, recording secretary; Mrs. Edmundo Morales, corresponding secretary; and Mrs. G. J. Inguagiato, treasurer.

Alexandria.

The Auxiliary to the Alexandria Medical Society held a meeting on January 28th at the home of Mrs. Lewis Mangus. Mrs. Thomas McGough was co-hostess.

Mrs. Zila Smith, of the Community Health Center, was the guest speaker. During her talk, Mrs. Smith thanked members of the Auxiliary for their Christmas contribution to the Health Center.

Mrs. Walter Brennan reported on the successful benefit performance of Hansel and Gretel, held on December 28th. Proceeds will benefit the Alexandria Hospital Building Fund.

Mrs. Robert L. Bregman

Current Currents

THE 107th ANNUAL MEETING of the American Medical Association will be held in San Francisco from June 23-27. Headquarters for the House of Delegates will be the Sheraton-Palace Hotel. Scientific and Technical Exhibits, films, color TV and lectures will be in the Civic Auditorium and the adjacent Plaza Exhibit Hall.

THE HAWAII SUMMER MEDICAL CONFERENCE, sponsored by the Hawaii Medical Association, will be held in Honolulu from July 1-3. The Conference has been timed to immediately follow the AMA meeting and is arousing a great deal of interest. Included on the program are breakfast panels and a special afternoon clinic at a local hospital.

Conference registration forms and travel information can be secured from Lee Kirkland Travel, c/o Medical Tours, P. O. Box 3433, Chicago 54, Illinois.

A TABLOID NEWSPAPER will soon be published by the AMA. The 16 page publication, recently authorized by the Board of Trustees, is expected to be distributed every two weeks to approximately 200,000 physicians. The AMA will use the paper to bring to the attention of its members the multitude of projects and activities carried on by the Association, and also non-scientific news of general interest.

The "AMA News" is expected to provide the answer to the problem of improving communications between the Association and its members. The paper will carry advertising and the editorial staff will work at AMA's Chicago Headquarters. The first issue will, in all probability, be ready for distribution during the annual meeting in San Francisco.

MILITARY CAREER INCENTIVES should be retained, according to AMA. A House Armed Services Sub-Committee has been conducting hearings on a bill which would revise military base pay structure and would scale down the special pay authorized for experienced medical officers. According to Dr. F. J. L. Blasingame, AMA General Manager, the present schedule is "a valuable method of preserving and improving the quality of military medical manpower".

BRITAIN'S CHANCELLOR OF THE EXCHEQUER has announced that contributions to the National Health Service will be boosted again in July. The increase applies to employers and those using the service. The House of Commons was told that the whole structure of social services would be imperiled unless their cost to the treasury was kept in bounds. Estimated cost of the health service during the coming fiscal year has been set at $2,072,000,000.

SEVENTY PER CENT of all prescriptions today are said to be for drugs discovered during the past ten years.

A SERIES OF ARTICLES dealing with various health problems of the aging has been reprinted in booklet form from the Journal of the AMA. Four of the eleven titles in the series are: "The Oldster and His Doctor"; "Stress and Exhaustion"; "Rehabilitation and Restorative Services", and "Preparation for Retirement Is a *Must.*" Copies of the booklet are available on request from the AMA's Council on Medical Service.

RUSSIAN PHYSICIANS and attorneys can expect to earn the equivalent of between $325 and $450 per month, according to information published in the Congressional Record. It is reported that a university professor will be getting $1,500 to $2,750 plus such extra benefits as autos at no cost. Experienced engineers are paid about the same as doctors, and high school teachers $300 to$325. Living costs in Russia are reflected in the price of shoes: ordinary $25; good quality, $75 to $100.

THE NATIONAL CHAMBER OF COMMERCE is advancing its own educational program of seven points. It does not include the same broad scholarship plan that is being proposed by the administration and some members of Congress, but would expand several operations now in effect and offer taxation advantages to schools, teachers and parents who pay college bills.

The Chamber proposes: *1.* Extend the life of the President's Committee on Scientists and Engineers to stimulate local, state and private action to improve science education and use of scientific manpower. *2.* Expand the National Science Foundation's program to improve teaching and provide research fellowships. *3.* Have the U.S. pay the full costs of research, military training and other services in its contracts with schools. *4.* Allow income tax deductions for a "reasonable percentage" of costs of college educations. *5.* Offer income tax incentives to individuals, foundations, and corporations to stimulate support for higher education. *6.* Permit teachers to make "reasonable" deductions from taxable income for money spent taking courses to improve their professional competence. *7.* Continue the college housing loan program, incorporating amendments by administration that would "restore this program to its original purpose of making capital funds available to expand college housing in institutions having no other satisfactory sources for such funds."

GREAT SOCIAL, political and economic changes are in store throughout the world because of an approaching "new era of younging electorates". This is the finding of economist Frank G. Dickinson, Ph.D., who reports that "The never-ending struggle of physicians against disease sometimes creates the impression that each hard-won gain will eventually mean an increasing proportion of older adults. (those over 49). Nevertheless, the proportion of older adults in some nations will soon start to decline."

Dr. Dickinson said the factors bringing about this change in the impact from eligible-voter masses by age groups are the rising birth rate and immigration which "more than counteract the mass of today's oldsters who are living longer because of medical advances. Both factors are producing many young voters."

President's Message . . . .

FOR SEVERAL YEARS now, the Virginia Council on Health and Medical Care under the exceptional guidance of Mr. Edgar J. Fisher, Jr., has made a fine reputation for itself, not only locally but nationally.

Several times a year commendations are received by this organization and its Director for the good work it promotes. It would be a laudable fact if these came from various communities in Virginia where the Council has helped out. But the extent of its accomplishments have gained it fame in the National Press. The evidence of its activity grows when one realizes that many of the Council's successes have been or are being copied elsewhere. It is a definite leader in its field.

Members of The Medical Society of Virginia should be proud of the close cooperation between our organization and Council. This privately supported, voluntary organization receives a portion of its operating income from the Medical Society annually. The value received is many times what we put into it. These are among the best dollars we spend.

Mr. Fisher is a hard working, energetic person who manages to always get to the right place at the right time, say the right thing, and bring home the honors for the Virginia Council. My hat is off to him and his organization.

H. C. Bates, Jr.

President

Editorial . . . .

On the Nature of the Roentgenologic Examination

A STREET-LAMP casts a shadow of a still person upon the pavement, a grotesque distortion (but obedient to the laws of geometry) of the person himself. What manner of person is it, its sex, race, age, and more profoundly, what is harbored within—benevolence or malevolence? To these can be likened the problems of the roentgenogram. When the person moves, our deductions may be simplified (fluoroscopy). But alas, how often can study of shadows lead us astray, especially in this age of feminization of the male and masculinization of the female? How low would Plato put the roentgenographic shadow in his scale of timeless verities!

The comparison of roentgenology with an isolated shadow from a street-lamp is not strict. The roentgenographic shadow is composed not only of contour, but density as well. Statistical probability gives the roentgenologist, like the actuarian, aid and comfort: an ulcer on the greater curvature of the stomach is cancer, and an infiltration in the appropriate segment of the upper lobe in a young person is tuberculosis, until both are proved otherwise. And both *are* proved otherwise. The street-lamp shadow is fixed in time; roentgenology depends heavily on *evolution:* what happens to the shadow over days or weeks or months. In any event, if our gentle reader is still with us, enough to convince him of our shadowy world.

The roentgenologist is working in a little corner that the Virchowian pathologist has forfeited: the latter uses the visible portion of the electromagnetic spectrum, hence is able to appreciate color, and has the advantage of other perceptions: touch, smell, consistency, and (if he chooses) taste. Use of these perceptions usually must await separation of the offending part from the body. The roentgenologist complements and supplements by studying this part *in vivo,* its density, and most important, its kinetics. Logically, the pathologist and roentgenologist are closer even than man and wife: they *are* one. If only man's life-span, capacity for learning, economic dictates could allow the translation of logic into reality with the total integration of these two beings into one!

The bulk of roentgenologic literature deals with the positive nature of the examination—what can be accomplished—and preciously little on its negative nature. An attempt to cover each system of the body would be folly, but a few words on a few points in a few systems must suffice for demonstration.

Mediastinal-hilar tuberculosis, lymphoma, metastasis from primary bronchogenic carcinoma, or from primary malignancy elsewhere above or below the diaphragm may present similar pictures. Some hundred agents can cause multiple rounded densities in the lungs. The propriety of using such terms as "hard, soft, exudative, productive" in describing the roentgenologic appearance of tuberculosis is doubtful, so poor is their correlation with reality. The presence of tuberculosis is diagnosed with certainty only by the presence of its organism. An incompletely or non-regressing, or non-explained shadow in the lung demands the help of other disciplines to exclude cancer, and the positive diagnosis of cancer can be made only with the microscope.

A fracture may be missed unless by chance the ray has encountered it end-on. Four or five projections may be necessary, especially in a cuboid structure. The examining finger may be more reliable in diagnosing fractures of subcutaneous bones as the ribs than the routine examinations of our $15,000 machines. (Not so with the underlying

lung and pleura.) Most bone lesions need the help of the pathologist for cellular diagnosis. A vertebral body may be riddled with granuloma or tumor and still appear normal on the standard examination. An almost unbelievably high degree of diffuse mineral loss may go undetected.

A calyx may be obliterated by spasm leading to the faulty diagnosis of neoplasm. A renal cell carcinoma may be roentgenologically silent if no distortion of the upper collecting system or renal contour is present. Ureteral stones of surprising size can be associated with no visualized dynamic effects on the urinary tract. And, as a logical limit, a stone invisible because of size or mineral make-up may be present with a completely normal intravenous pyelogram, or a barely detectable distortion of the interureteric ridge on the involved side from edema of the intramural ureter. Bladder stone and iatrogenic silver nitrate may be roentgenologic kin.

Possibly "tricky" hemodynamics account at least in part for the poor showing of roentgenology in demonstrating esophageal and gastric varices. The whimsy of demonstrating small hiatal hernias needs no comment. He who differentiates esophagus and stomach by radiographic mucosal pattern will often err. Even the most meticulous of techniques misses free intraperitoneal gas in 5 to 10% of perforated viscera. Gastritis, even with hemorrhage, may have no roentgenologic abnormality provided the submucosa and glandular volume do not depart too far from normal. Vast reaches of the stomach may be involved with malignant subepithelial extension with surprisingly little roentgenologic involvement. Ulcers with appreciable depth may elude roentgenologic demonstration. A repeated examination made shortly thereafter may disclose a large crater readily. Spasm of the smooth muscle in the collar of the ulcer or the entire segment of the muscular tube must play a role. One is forced to the conclusion that there is close patho-physiologic relation between spasm and atony, though antipodal in their appearance. Diagnosis of malignant change in an ulcer may tax the skilled pathologist with his microscope, let alone the roentgenologist with his shadows. The roentgenologic "pre-pyloric suspect" may prove surgically to have nothing, a congenital band, inflammatory adhesions, hypertrophic muscle, gastritis, peptic ulcer or cancer. How often must peptic ulcer in the duodenal bulb elude the best of roentgenologists! And how often must some of our "craters" be radiologic imagery! Papers have been written on the significant incidence of serious lesions found surgically following normal barium enemas competently done. Cancer and feces may be the same to the roentgen ray, though not to the bearer.

Diagnostic roentgenology may take pride in the confidence put in it, and the ever increasing demands made of it. However, its limitations stemming from its nature must never be lost sight of. Its opportunities for offering cell-specific diagnoses are limited; its opportunities for suggesting additional avenues of approach are great; its opportunities for offering help when its findings are integrated into the clinical patterns are maximal. Only that which is seen has roentgenologic substance; nonvisualization may be real, or false with deadly consequences. Roentgen findings contrary to soundly based clinical opinion should be accepted with circumspection. A second barium enema may show the cancer where the first one failed. Knowing this negative nature of roentgen ray, the conscientious roentgenologist must walk the perilous crest between the abyss of unwarranted conclusions on the one side, and the abyss of obfuscating verbal barrage to preserve a fancied unsullied reputation on the other, and must try safely to reach the opposite side where he can help his doctors practice good medicine.

CHRISTIAN V. CIMMINO, M.D., F.F.R.

News Notes . . . .

New Members.

The following new members have been admitted into The Medical Society of Virginia since the list published in the March issue of the Monthly:

Samuel Wesley Atkins, Jr., M.D., Danville
Richard Russell Chamberlain, M.D., Roanoke
Joseph R. Gazala, M.D., Richmond
Thomas Leonard Gorsuch, M.D., Waynesboro
Reginald Buchanan Henry, Jr., M.D., Norfolk
Patricia Alynne Hunt, M.D., Amherst
Thomas Allen Kirk, Jr., M.D., Roanoke
William Francis McGuire, M.D., Pulaski
George Stanley Mitchell, Jr., M.D., Warwick
Robert Edward Musgrave, M.D., Danville
John David Powell, M.D., Stuart
Lee Weldon Shaffer, M.D., Roanoke
David Valentine Strider, M.D., Charlottesville
Homer Allen Sweetman, M.D., Richmond

Richmond Committee on Arrangements.

Dr. Guy Horsley is General Chairman of the Committee on Arrangements of the annual meeting of The Medical Society of Virginia to be held in Richmond, October 12-15. Others on the Committee are: Dr. W. Linwood Ball, hotels and halls; Dr. William R. Hill, technical exhibits; Dr. Frank M. Blanton, scientific exhibits; Dr. William Johns, golf; Dr. Harold I. Nemuth, entertainment; Dr. Carrington Williams, Jr., press and publicity; and Mrs. George K. Brooks, Jr., Woman's Auxiliary.

The Virginia Academy of General Practice

Is holding its Eighth Annual Scientific Assembly May 8-11 at The Cavalier, Virginia Beach. All members of The Medical Society of Virginia are extended a special invitation to attend.

Subjects to be presented by nationally renowned physicians will include cancer, heart, diabetes, marriage counseling, pediatrics, arthritis, and psychiatry. In addition, a selected group of outstanding scientific exhibits will be displayed.

Scientific sessions will start May 9 with the Virginia Diabetes Association's portion of the program and will close May 11 at noon.

Social activities will include the Golf Tournament, cocktail party, and dinner May 8, dancing in the Hunt Room Friday, and the dinner dance Saturday evening. Special entertainment for the wives has been planned by the Woman's Auxiliary for each day.

For a long weekend of the best in postgraduate education combined with the finest recreational facilities, the Virginia Academy of General Practice urges each of you to plan to be at The Cavalier May 8-11.

Dr. Vincent W. Archer,

Charlottesville, has been elected as the 35th President of the American College of Radiology. He was installed at the annual meeting of the College in Chicago on February 7th. Dr. Archer is chairman of the Department of Radiology at the University of Virginia School of Medicine.

Dr. Dennis P. McCarty

Has been elected President of the Front Royal Rotary Club. He was named a member of the Board of Directors at a recent meeting.

Drs. William Humphries and Dixon Whitworth have also been elected to the Board of Directors.

Virginia State Dental Association.

A cordial invitation has been extended to the members of The Medical Society of Virginia to attend the annual meeting of the Dental Association to be held at the John Marshall Hotel, Richmond, May 4-7.

Dr. John C. Tyree, Richmond, is president, and Dr. W. T. McAfee, Roanoke, secretary-treasurer.

Virginia State Board of Medical Examiners.

At the meeting of the Board on December 7th, the following were licensed by examination:

Dr. Mary Bertucio Arnold, Chapel Hill, N. C.
Dr. Richard Neville Armstrong, Petersburg
Dr. Guenter J. J. Augustin, Alexandria
Dr. Otto Robert Beecken, South Miami, Fla.
Dr. Bruce Ben Bellomy, Staten Island, N. Y.
Dr. Mary Ann Bigger Burton, Richmond
Dr. Francis Thomas Daly, Baltimore, Md.
Dr. Guido Roger Escalante, Columbus, Ohio
Dr. John Zbigniew Fichtner, Canton, Ohio
Dr. Hjordis Mannbeck Foy, Hanover, Md.
Dr. Waguih Youssef Gazale, Cleveland, Ohio
Dr. Werner A. Gergen, Washington, D. C.
Dr. Francisco Manual Gonzales, Washington, D. C.
Dr. William Noel Gordge, Roanoke
Dr. Don Franklin Hatten, Richmond
Dr. Juergen Hubert, Richmond
Dr. Nicholas M. Juhasz, Asbury Park, N. J.

Dr. Benigno R. Lazaro, Baltimore, Md.
Dr. Zdenko Lucaric, Newark, N. J.
Dr. Douglas Stewart MacKenzie, Danville
Dr. Johannes Marinus, Staunton
Dr. Simon Meleck Petersburg
Dr. Edward Nenon Mogan, Nashville, Tenn.
Dr. Peter Van Cortlandt Moore, Iowa City, Iowa
Dr. William Osgood Myers, Hampton
Dr. Jose Navarrete, Greystone Park, N. J.
Dr. Alexander F. Petzinger, Richmond
Dr. Italo Pio Rinaldi, Dayton, Ohio
Dr. Rafael Roman, Richmond
Dr. Arno Albert Roscher, Jacksonville, Fla.
Dr. Wasyl Salak, Brooklyn, N. Y.
Dr. Kurt T. Schmidt, Hopkinsville, Ky.
Dr. Eugenia Urbanovich, Petersburg
Dr. Lawrence Wilkinson, Lynchburg.
Dr. Dorothy Longstreth Woods, Durham N. C.

The following were licensed by endorsement of credentials:

Dr. Glenn Stuart Aggerup, Norfolk
Dr. Arthur Morgan Benshoff, Jr., Ronceverte, W. Va.
Dr. Hubert Hieronymus Blakey, Alexandria
Dr. Karl Kenneth Boyd, Wise
Dr. Winston Murphy Bryant, Ettrick
Dr. John Charles Bucur, Arlington
Dr. Laurence Lee Cockerille, Washington, D. C.
Dr. J. Wesley Crossley, Roanoke
Dr. Thomas Childs Delvaux, Jr., Martinsville
Dr. Jerry Frank Donin, Portsmouth
Dr. Ralph Lester Eslick, Marion
Dr. Russell Lewis Fankhouser, Bristol
Dr. Harry Marshall Fletcher, Washington, D. C.
Dr. Charles Frank George, Clintwood
Dr. Samuel Alan Graham Jr., Portsmouth
Dr. Frederick Moulton Gross, Jr., McLean
Dr. Derwin Kay Harmon, Roanoke
Dr. Basil Thomas Harter, Boston, Mass.
Dr. Josias Henry Hawkins, Richmond
Dr. William Rayner Johnson, Winchester
Dr. William Burton Johnston, Richmond
Dr. William Michael Lordi, Richmond
Dr. Clinton G. Lyons, Santa Monica, Calif.
Dr. Waleed Gabriel Maloof, New York, N. Y.
Dr. Charles Bennett Marshall, Martinsville
Dr. George William Martin, Roanoke
Dr. Harry Michael McDermott, Jr., Fairfax
Dr. William Obed Miller, Virginia Beach
Dr. Frederic Augustin Moretti, Washington, D. C.
Dr. John Mullaney, Williamsburg
Dr. E. Louise Payne, Charlottesville
Dr. Henry Harwood Pendleton, Jr., Radford
Dr. Richard P. Perrine, Clintwood
Dr. Robert David Proffitt, Richmond
Dr. Donald Rathbun, Jr., Charlottesville
Dr. William John Reardon, Falls Church
Dr. William Arthur Reynolds, Wise
Dr. Richard Frank Richie, Williamson, W. Va.
Dr. Elinor Alice Rossbach, Washington, D. C.
Dr. Howard Carlisle Scott, Richlands
Dr. Robert Batchelder Shepardson, Dahlgreen
Dr. Joseph Ellyn Shuman Arlington
Dr. Donald Paul Smith, Pamplin
Dr. Pete Joe Starr, Roanoke
Dr. Daniel Stowens, Washington, D. C.
Dr. Howard Elbert Sturgeon, Norfolk
Dr. Harold Stanley Tidler, Lanham, Md.
Dr. Aaron Hardy Ulm, New York, N. Y.
Dr. John Delwin Voltmann, Arlington
Dr. James Christopher Walsh, Jr., Washington, D. C.
Dr. William Franklin Weller, Roanoke
Dr. Lewis Emmor Wells, Jr., Richmond
Dr. Gerald Albert Williams, Charlottesville
Dr. Charles Calvin Yerbury, Clintwood
Dr. Lawrence Joseph Zaino, Hampton
Dr. Bernard Harold Zeavin, Alexandria

Dr. Reno R. Porter,

Richmond, is the recipient of a "grant-in-aid" from the Peninsula Heart Association. The grant, in the amount of $3,900, supports the research studies conducted by Dr. Porter at the Medical College of Virginia which are concerned with the "Circulatory Dynamic Effects of Digitalis in the Normal and Hypervolemic Dog".

Tri-State Medical Association.

The annual meeting of this Association was held in Richmond, February 10-11. Dr. William P. Jordan, Richmond, was elected president; Dr. J. P. Rousseau, Winston-Salem, N. C., Dr. Mary Elizabeth Johnston, Tazewell, and Dr. Furman Wallace, Spartanburg, S. C., vice-presidents; and Dr. R. B. Davis, Greensboro, N. C., re-elected secretary-treasurer.

Dr. William S. Jordan, Jr.,

Has been appointed professor of preventive medicine and chairman of the department of preventive medicine and professor of internal medicine at the University of Virginia School of Medicine. His appointment is effective May 1st. Dr. Jordan is at present associate professor of preventive medicine and assistant professor of medicine at Western Reserve University School of Medicine in Cleveland.

Annual Spring Clinic.

The Norfolk County Medical Society held its annual spring clinic on April 2nd. The subject for discussion was Inflammatory Diseases and the following papers were presented: Diagnostic Problems of the Hepato-Biliary System and Pancreas, Dr. Charles M. Caravati, Richmond; Puerperal and Non-Puerperal Pelvic Inflammatory Disease, Dr. Charles S. Stevenson, Wayne State University, Detroit; The Diagnosis of Arthritis, Dr. Oscar Swineford, Jr., University; The Pathology of Inflammation, Dr. William E. Ehrich, University of Pennsyl-

vania, Philadelphia. A Panel on Therapy in Inflammatory Disease, Modern Concepts and Techniques was participated in by the above doctors and by Drs. George Elsasser, Jr., and Robert L. Payne, Jr., of Norfolk. A cocktail hour and dinner was held at the Norfolk Yacht and Country Club.

Virginia Pediatric Society.

At the annual meeting of this Society, held in Williamsburg, February 28th and March 1st, Dr. Harry D. Cox, Portsmouth, was elected president, Dr. Robert H. Cox, Jr., Lynchburg, was named vice-president and Dr. O. Watts Booth, Newport News, secretary-treasurer.

Dr. A. P. Booker, Charlottesville, is the retiring president.

Dr. W. T. Thompson, Jr.,

Richmond, has been named a co-chairman of a two and a half million dollar campaign for higher education by the Presbyterian Synod of Virginia. He will serve as chairman for laymen in the campaign to begin this fall.

American Academy of Pediatrics.

The Virginia Chapter of the Academy recently elected Dr. E. L. Kendig, Jr., as president and state chairman. Dr. Paul Hogg, Newport News, was elected vice-president, and Dr. Carolyn McCue, secretary-treasurer.

Congress of Internal Medicine.

The world's largest international gathering of scientists and clinicians concerned with internal medicine will be held in Philadelphia, April 24-26, at the Fifth International Congress of Internal Medicine. In addition to leading internists from America, 81 foreign speakers representing 27 other nations will participate in the scientific program. There will be leading physicians from the Soviet Union, Czechoslovakia, Hungary, Rumania, and Poland.

Information and registration forms may be obtained by writing Mr. E. R. Loveland, secretary-general, 4200 Pine Street, Philadelphia 4, Pa.

Hawaii Summer Medical Conference.

An invitation has been extended by the Hawaii Medical Association to attend their Conference in Honolulu, July 1-3. Included in the program are breakfast panels and a special afternoon clinic at a local hospital. The Conference has been timed to immediately follow the A.M.A. Annual Meeting in San Francisco.

For additional information, Conference Registration Forms, or to place reservations, contact Lee Kirkland Travel, c/o Medical Tours, P. O. Box 3433, Chicago 54, Illinois.

Annual Joint Meeting.

Twenty-nine clinical pathologists and about 100 medical technologists attended the fifth annual joint meeting of the Virginia Society of Pathology and Laboratory Medicine and the Virginia Society of Medical Technologists in Richmond, March 8th.

The scientific sessions stressed evaluation and quality control of medical laboratory tests.

A paper on "Hemoglobin Evaluation Studies in a Community" was presented by Richard E. Palmer, M.D., Alexandria, and William D. Dolan, M.D., Arlington. The paper discussed periodic evaluations of hemoglobin tests in 21 laboratories in the Washington, D.C., area over a period of five years. It brought out that repeated evaluations resulted in adoption of certain changes in standards of reference, procedures, and technics. As the result, in the latest survey 80% of hemoglobin tests performed in laboratories supervised by pathologists were found to vary only in slight degree and none of the determinations varied to a clinically significant degree.

Nelson F. Young, Ph.D., professor of clinical biochemistry at Medical College of Virginia, discussed "Need for Quality Control in the Clinical Laboratory." As evidence of the need, he cited an international survey made by a research organization in England in which identical vials of freeze-dried horse serum were sent to about 20 laboratories in each of 8 countries, including the United States, for determinations of glucose, proteins and other counts. Wide variation was found in the results. Some variation was later proved to be due to unequal deterioration of the test samples, but this did not account for the full discrepancies.

In a third paper, "The Use of Simple Statistical Methods in Laboratory Quality Control," Loyal H. Davis, assistant to the chief of manufacture, Phillip Morris, Inc., described quality control measures used in industry and suggested adaptations applicable to medical laboratories.

In his paper on "Application of Quality Control in Clinical Pathology," George Z. Williams, M.D., National Institutes of Health, Bethesda, Maryland, said that "Even in a clinical research hospital, it is necessary to conduct daily quality control of laboratory procedure to maintain acceptable and reliable results."

Robert J. Faulconer, M.D., Norfolk, and Mrs. Bertha Gassett, M. T. (ASCP), Harrisonburg, were installed as incoming presidents of the Societies.

Psychiatrist Wanted.

Unusual opportunity for a young psychiatrist in a Virginia hospital. Male, completion of formal psychiatric training and Board eligible. Associate in practice. Reply to #375, care the Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Virginia. (*Adv.*)

For Rent.

Modern office near Lee Building, Richmond. Reasonable. Write #300, care of the Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

Obituaries . . . .

Dr. D. Hunter Marrow,

Boydton, died February 21st, at the age of ninety-two. He was a native of Union Level and studied medicine at the Medical College of Virginia and the University of Virginia, receiving his degree from Jefferson Medical College in 1889. Dr. Marrow practiced medicine in Mecklenburg County for many years. He was a Life Member of The Medical Society of Virginia, having joined in 1895.

A daughter and a son survive him.

Dr. George Hannah Reese,

Petersburg, died February 13th. He was seventy-three years of age and a graduate of the Medical College of Virginia in 1909. Dr. Reese had practiced medicine in Petersburg for many years and at one time was director of the medical center at Central State Hospital. He had been a member of The Medical Society of Virginia for forty-seven years.

His wife, a son and three daughters survive him.

Dr. Millard Bridgeman Savage,

Norfolk obstetrician and gynecologist, died February 10th. He was sixty-one years of age and received his medical degree from the University of Virginia in 1921. Dr. Savage had practiced in Norfolk since 1924. He was a member of the visiting staffs of the Norfolk General, Leigh Memorial and DePaul Hospitals. He had been a member of The Medical Society of Virginia for thirty-three years.

His wife survives him.

Dr. Carroll Edward Foley,

Front Royal, died February 27th, at the age of seventy-one. He was a native of Clarke County and a graduate of the former University College of Medicine in 1913. Dr. Foley began his practice in Lovettsville and located in Front Royal in 1927 where he specialized in eye, nose and throat diseases. He served in the Army Medical Corps during World War I. Dr. Foley had been a member of The Medical Society of Virginia for thirty-eight years.

His wife and a daughter survive him.

Dr. Arthur Dixon Hutton,

Marion, died February 11th after a brief illness. He was sixty-one years of age and a graduate of the Medical College of Virginia in 1927. Dr. Hutton was a member of the staff of Southwestern Virginia State Hospital, and he had practiced in Marion for thirty years. He was a member of The Medical Society of Virginia, having joined in 1934.

Four sisters and a brother survive him.

The following Memorial, written by Dr. Joseph R. Blalock, was presented in a Memorial Service at Southwestern State Hospital and was adopted by the Smyth County Medical Society:

When I came to the Southwestern State Hospital twenty years ago Dr. Hutton was in charge of the male service, and he had been here for over ten years. All of the Staff of 1938 have passed on—Drs. Wolfe, McCarty, and Hutton. While a medical student he worked here summers in the medical laboratory under Dr. George A. Wright. His duties as physician commenced in July, 1928. He remained with us until on January 1, 1944, he was sent to the Lynchburg Colony as Acting Superintendent, and on June 8, 1944, he left the State service and served for several years on the staff of Lee Memorial Hospital as resident physician, playing an important part of that hospital, and he continued on the Board of Directors until his death. We were fortunate when he decided to come back into State service, and he returned to Southwestern March 15, 1955. During this period he has continued his services on the male services and in particular in charge of the Criminal Insane Department.

From the standpoint of a hospital superintendent and the hospital staff I cannot say enough about Dr. Hutton's many and fine qualifications. He was a wonderful psychiatrist and physician. The many who have been treated by him for sickness and various emergencies such as burns, fractures, dislocations, and lacerations can attest to his skill and judgment in taking care of all these situations and those to whom he has administered care always felt reassured and confident in his fine judgment and skill.

His energy was tremendous, and it shown in so many ways. He would come to the hospital early. He would see the patients at breakfast. He would personally check

the dining rooms. He would visit his wards religiously every day and not in a casual manner but pass them standing or seated one by one with attention to that particular one when he was passing. He was always available when on duty, and no one was more gracious in changing days on duty with another physician or coming up to the hospital on off duty times to give anesthetics and help in emergencies.

Too much cannot be said about Dr. Hutton's sterling character. He was absolutely honest. He was loyal, and one could always count on his word. He was entirely abstinent in that he did not smoke or drink, and in every respect he was a person of strong, most exemplary moral character. He worked hard during his long hours at the hospital, but on his off duty hours he was quite self-sufficient in the following of his other interests. When he lived on the grounds he was interested in his garden. He spent a great deal of his spare time going to his home where he was entirely wrapped up in the welfare of his immediate family, indentifying himself strongly with their problems. He was quite a baseball and football enthusiast and on his vacations would see Big League Basehall games and see important pro and intersectional football games. He was devoted to his church and has for a long time actively identified himself with the Marion Rotary Club.

In the loss of Dr. Dick we have lost a wonderful physician and his place will be hard to fill.

Dr. Revercomb

The members of the Alleghany-Bath County Medical Society are grieved at the passing of our friend and fellow physician Dr. William M. Revercomb and wish to express to the members of his family our deepest sympathy.

Dr. Revercomb was born in Highland County, September 3, 1880. After attending local schools he entered Augusta Military Academy where he graduated in 1900. He graduated from the Medical College of Virginia in 1904 with the degree of Doctor of Medicine and accepted a position as resident physician in Central State Hospital, Petershurg. Following his service in this institution he entered New York Polyclinic Hospital where he served on the house staff for a period of twenty months attaining the position of House Surgeon. Following this he served as a resident in St. Mary's Maternity Hospital, Brooklyn, New York.

Dr. Revercomb began private practice of medicine near Beckley, West Virginia, where he remained for only a brief period before coming to Clifton Forge to be associated with Dr. Bonner. He opened his own office in 1907, where he continued in private practice for fifty years until the date of his death, November 8, 1957.

He was a member of the visiting staff of the Chesapeake and Ohio Hospital and also served as secretary of the Board of Health of Clifton Forge during the greater part of his period of practice in this city.

Dr. Revercomb held active membership in a number of medical societies including the following:

He was a charter member of the Alleghany-Bath County Medical Society and served as treasurer of this organization for many years. He was also a member of the American Medical Association, The Medical Society of Virginia, The Valley of Virginia Medical Society, The American Association of Railroad Surgeons and of the Chesapeake and Ohio Railway Surgeons Association.

Dr. Revercomb was a member of the Clifton Forge Presbyterian Church and for many years served as a Ruling Elder of the Session. He was also a member of the Men's Bible Class of this church.

Dr. Revercomb was a Shriner of the Acca Temple, Richmond and member of the Knights Templar.

As we think over our association with Dr. Revercomb we think of one whose devotion to duty was unsurpassed. He gave to his patients every care that a skilled physician could give. We count it a high privilege to have been with him, to have worked with him as a fellow physician and to have known him as a true friend.

Therefore, Be It Resolved by the Alleghany-Bath County Medical Society that we extend to the bereaved family our deepest sympathy.

Be It Further Resolved that a copy of these resolutions be tendered Mrs. Revercomb and that they become a part of the minutes of the Alleghany-Bath County Medical Society.

William P. Gilmer, M.D.
George N. Chucker, M.D.

Dr. Magruder

L. Freeland Magruder, M.D., FACR, Portsmouth, after a protracted illness died at his home on January 31, 1958, in the 78th year of his life. Dr. Magruder was born in Mississippi, and was educated in the Public Schools of Louisiana and of Mississippi. He was a graduate of Millsaps College and received his M.D. degree from Tulane University in 1905.

The associations he made as Radiologist to the University of Virginia Hospital Unit overseas in World War I motivated him to locate in Tidewater Virginia after the war. Not only was he a pioneer in the field of radiology in his home state, having started his practice originally in 1905 with a static machine, he was the first in this section of Virginia to limit his practice to radiology. He served as Radiologist in charge at the Norfolk Protestant, now Norfolk General Hospital from 1919 to 1939. From 1941 to his retirement in 1955 he served in the Departments of Radiology at Parrish Memorial, Maryview and King's Daughters', now Portsmouth General Hospital in Portsmouth.

Dr. Magruder to his many friends was a man of strong convictions and a thorough Southern gentleman. He was intolerant of any pretense, and devoid of any desire to be in the limelight. His genial personality and ahility to resolve controversies made him a valuable and enjoyable companion and colleague. He was a member of many national, sectional and state societies. He was a diplomate of the American Board of Radiology and a Fellow of the American College of Radiology. He was a member of the American Roentgen Ray Society and honorary member of the Portsmouth Academy of Medicine. He was a memher of the Methodist Church and a Rotarian of Senior standing. His passing has brought sorrow to his many friends and associates.

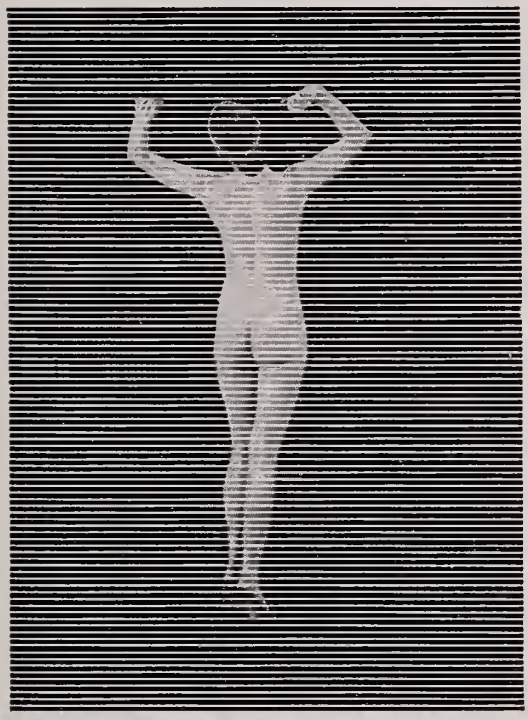
In consequence of our loss be it resolved that these resolutions be recorded in the records of the Portsmouth Academy of Medicine and copies sent to The Medical Society of Virginia, his surviving wife and to his sister.

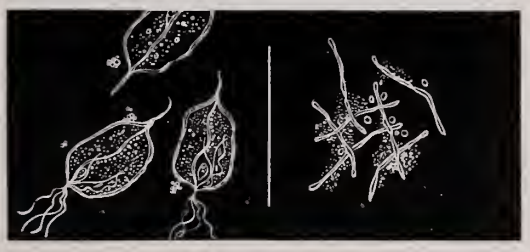
F. P. Barrow, II, M.D.
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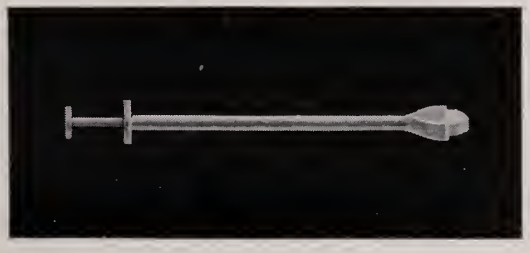
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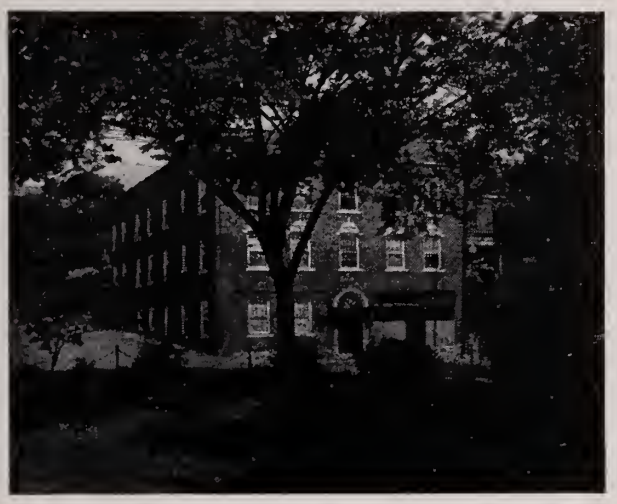


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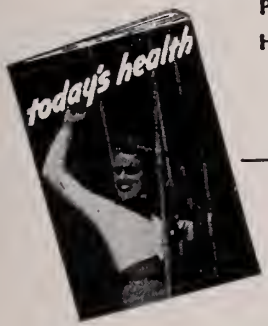
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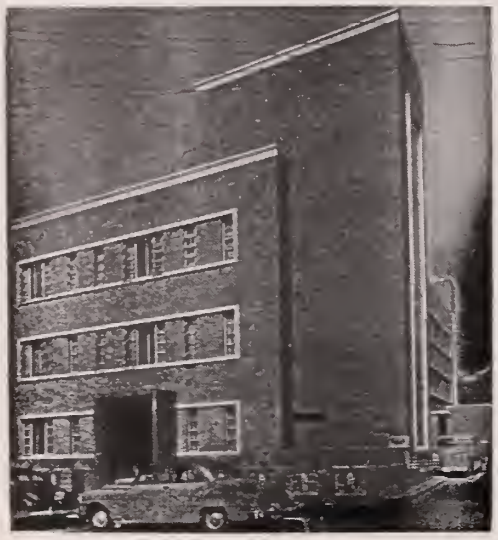
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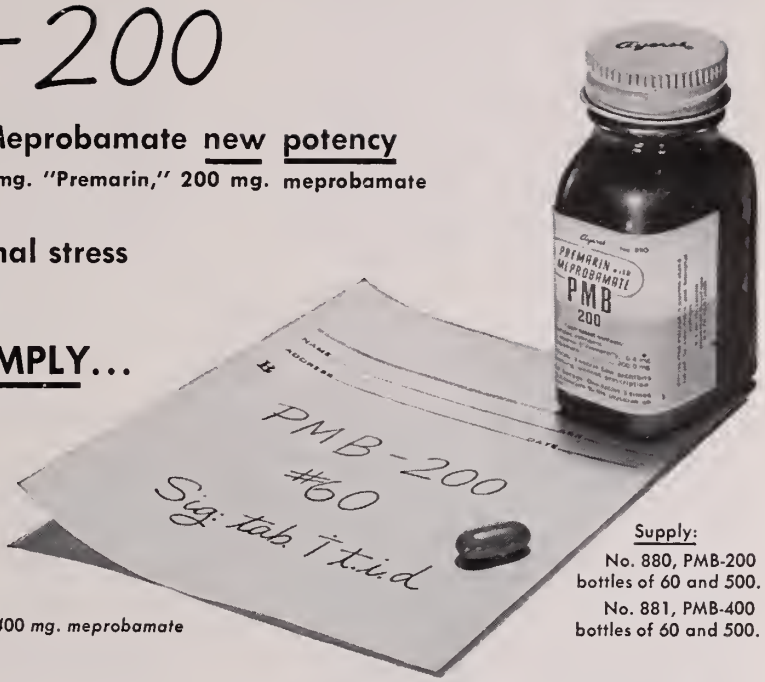
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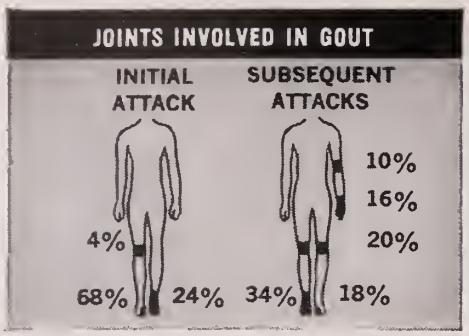
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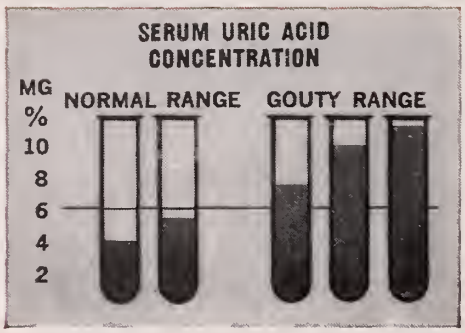
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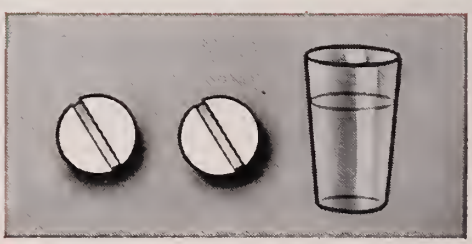
1. Recurrent joint pain followed by long periods of complete remission. *(Percentages refer to incidence.)*



2. Enlargement of bursae such as in this case involving the olecranon bursa.



3. Elevated serum uric acid levels.



4. Colchicine test: full dose (0.5 mg.) every 1 to 2 hours until pain is relieved or nausea, vomiting or diarrhea occur. The test requires usually 8 to 16 doses. Pain relief is highly indicative of gout.

FROM THESE FINDINGS . . . SUSPECT GOUT:

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A SPECIFIC FOR GOUT

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RECOMMENDED DOSAGE: 0.25 Gm. (½ tablet) twice daily for one week followed by 1 Gm. (2 tablets) daily in divided doses.

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* J.A.M.A. *166*:158,1958; Welsh,A.L. and Ede,M. *"...prompt remissions of...acute phases."* with TARCORTIN

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* 1. Clyman, S. G.: Postgrad. Med. *21*:309, 1957.
2. Bleiberg, J.: J. M. Soc. New Jersey *53*:37, 1956.
3. Abrams, B. P., and Shaw, C.: Clin. Med. *3*:839, 1956.
4. Welsh, A. L., and Ede, M.: Ohio State M. J. *50*:837, 1954.
5. Bleiberg, J.: Am. Practitioner *8*:1404, 1957.



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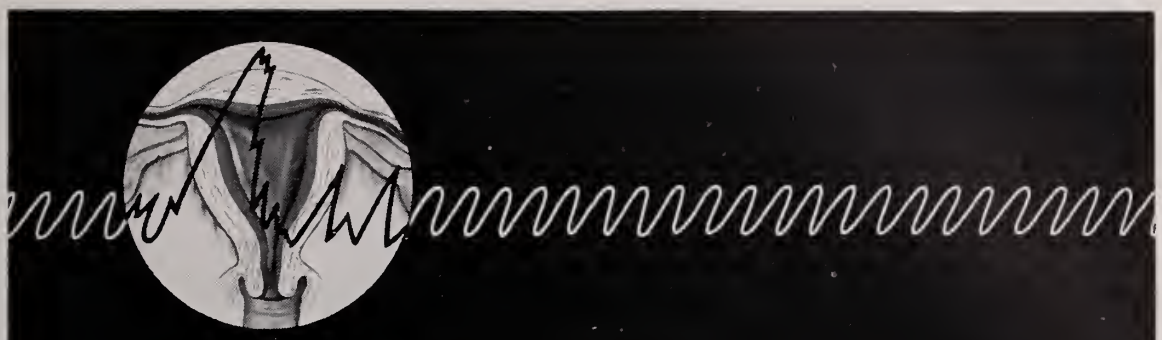


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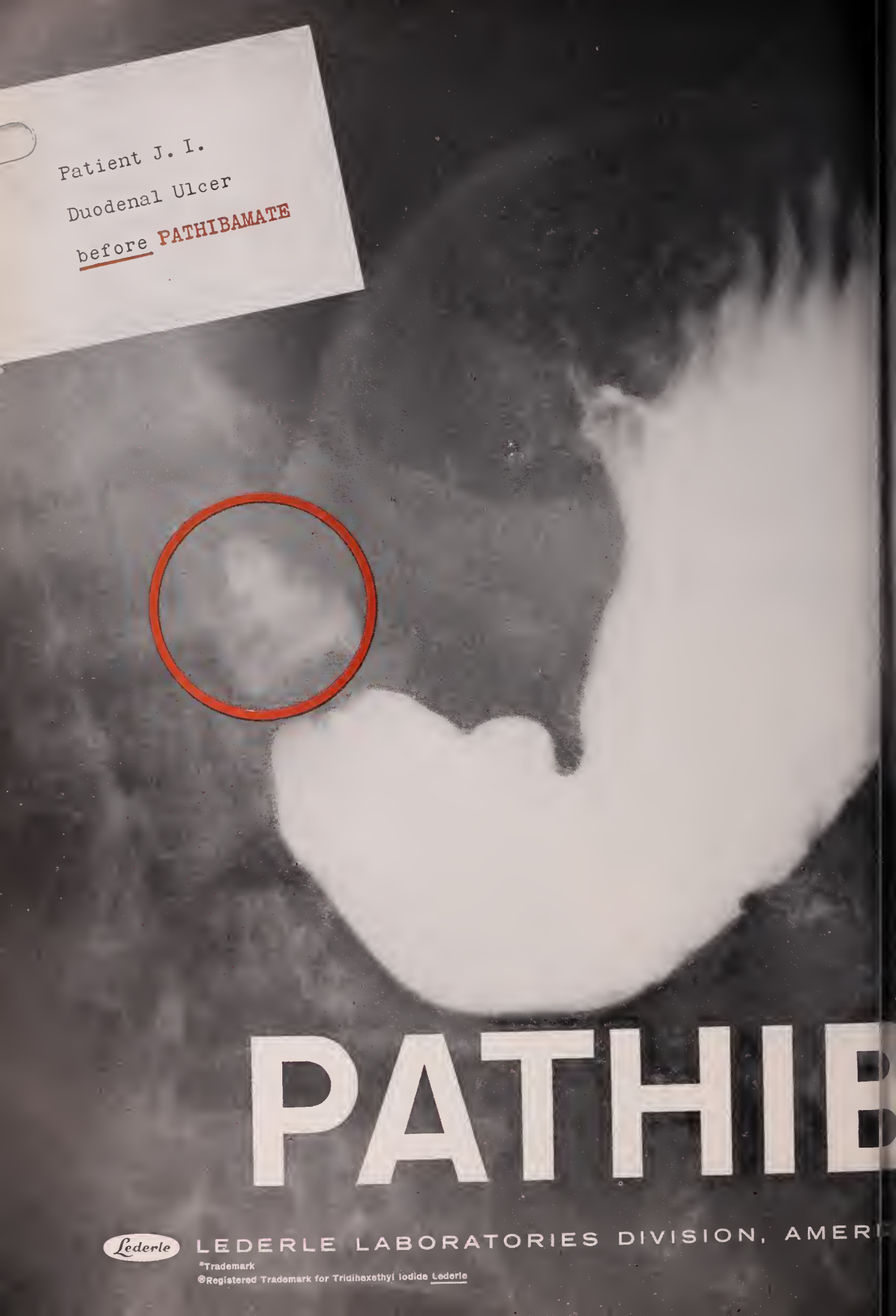
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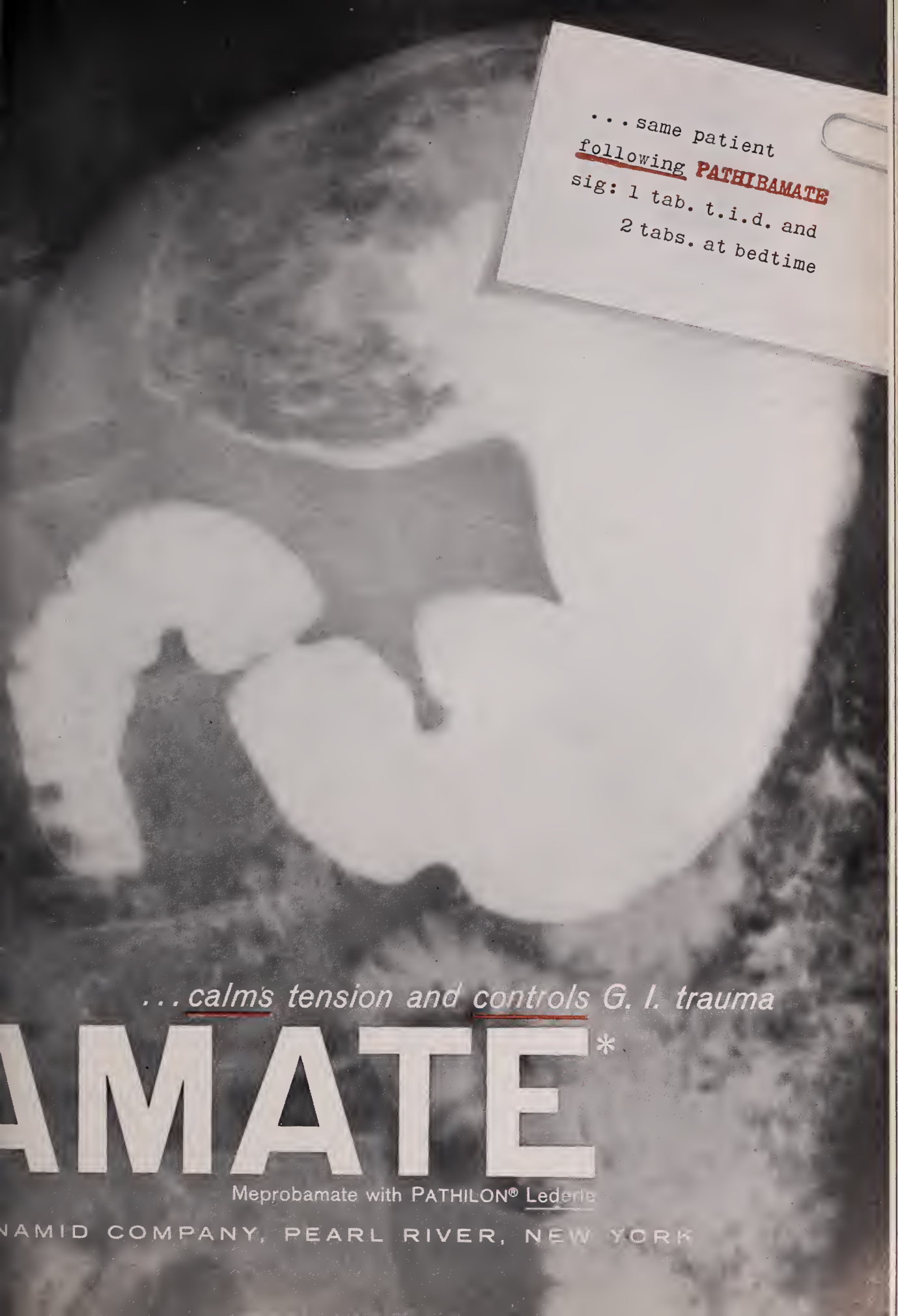
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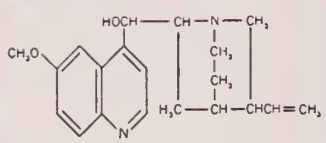
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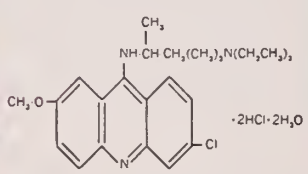
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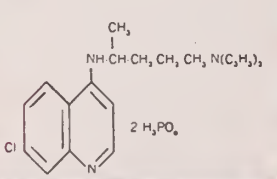
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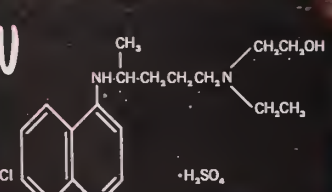
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REFERENCES

1. Scherbel, A.L., Schuchter, S.L., and Harrison, J.W.: *Cleveland Clin. Quart.* 24:98, Apr., 1957.
2. Schoch, A.G., and Alexander, L.J.: The Schoch section, *Bull. A. Mil. Dermatologists* 5:25, Nov., 1956.
3. Cornbleet, Theodore: Arch. Dermat. 73:572, June, 1956.

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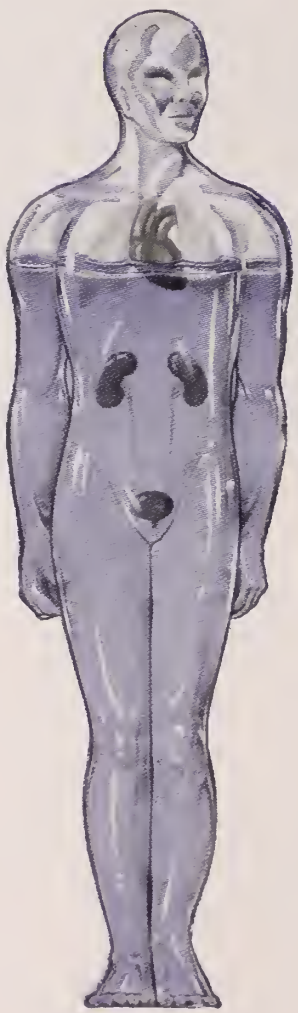
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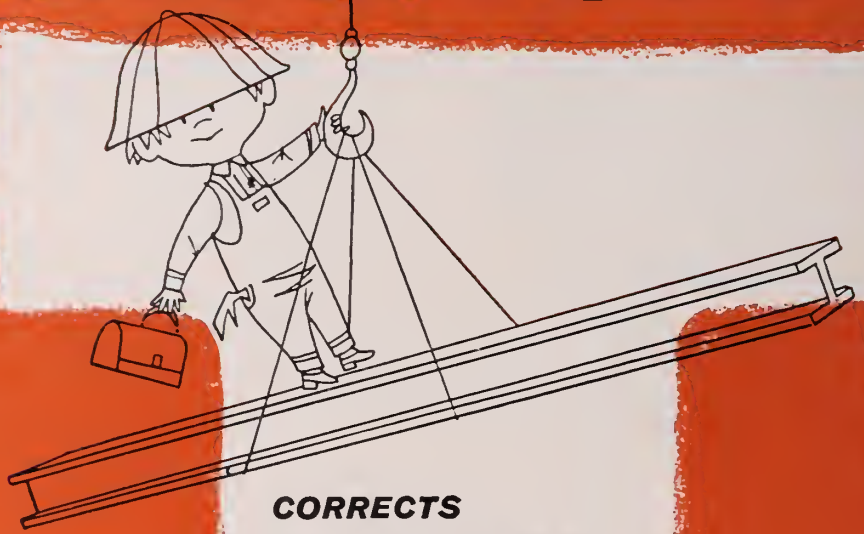
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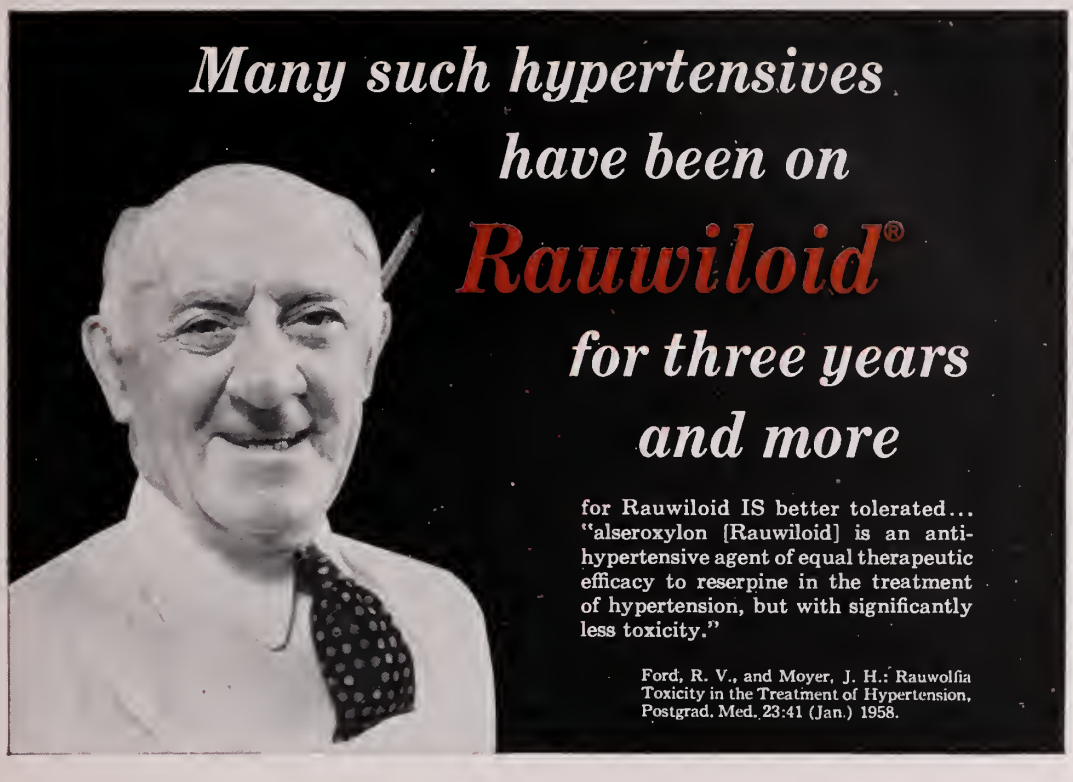
l-Lysine HCl	300 mg.
Ferric Pyrophosphate (Soluble)	250 mg.
Iron (as Ferric Pyrophosphate)	30 mg.
Vitamin B_{12} Crystalline	25 mcgm.
Thiamine Mononitrate (B_1)	10 mg.
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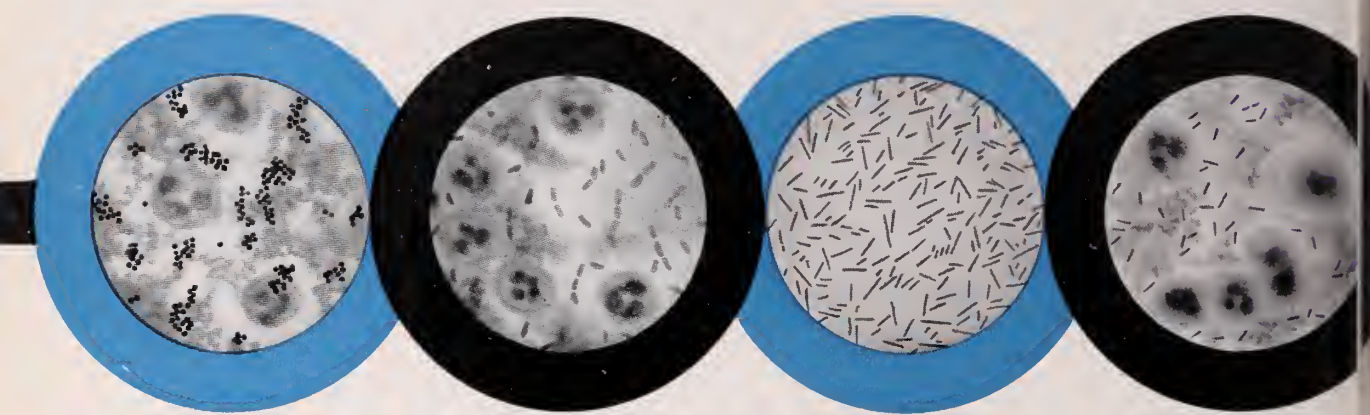
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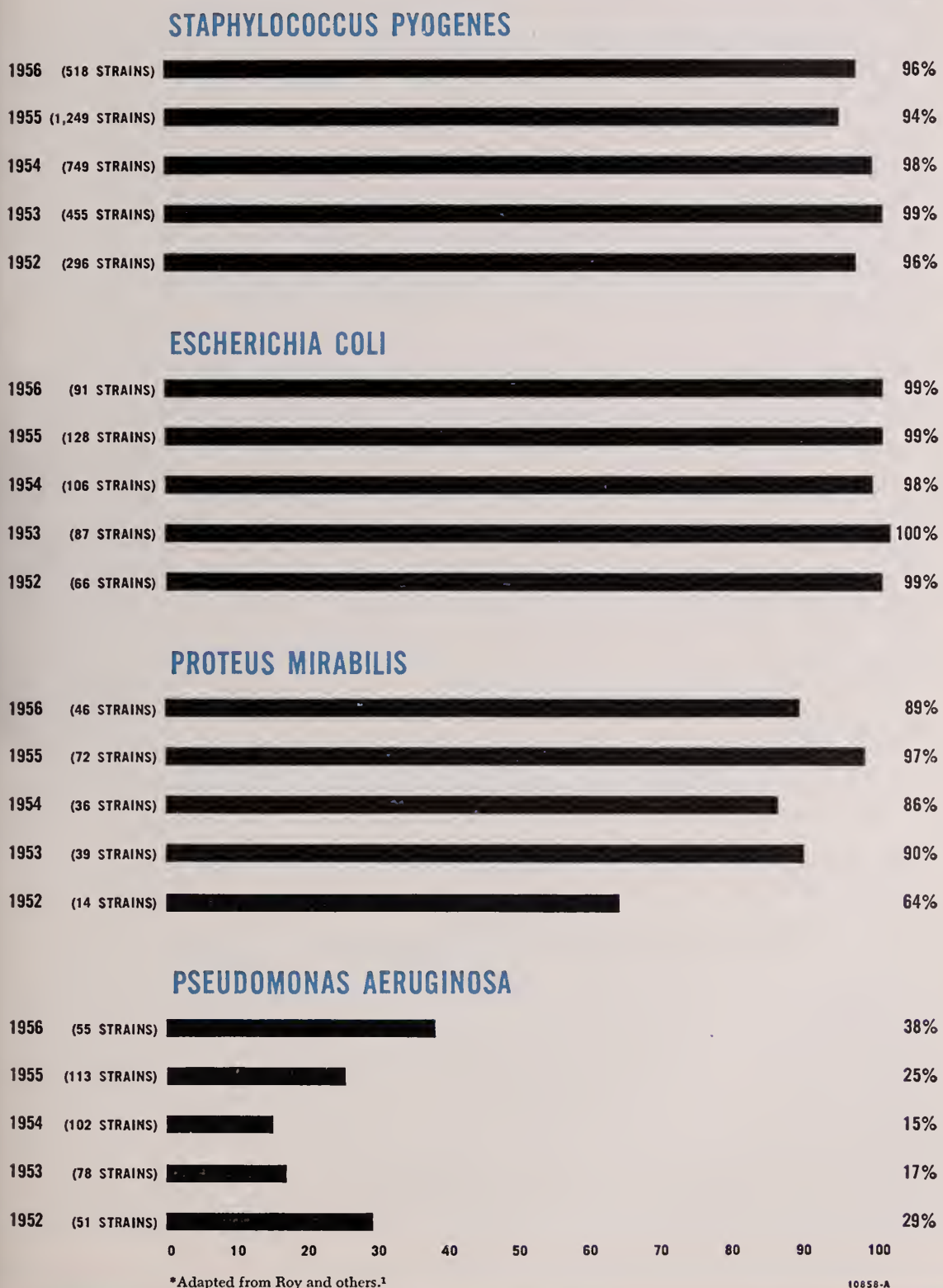
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REFERENCES: (1) Roy, T. E.; Collins, A. M.; Craig, G., & Duncan, I. B. R.: *Canad. M.A.J.* 77:844 (Nov. 1) 1957. (2) Schneierson, S. S. *J. Mount Sinai Hosp.* 25:52 (Jan.-Feb.) 1958. (3) Koch, R., & Donnell, G.: *California Med.* 87:313, 1957. (4) Waisbren, B. A., & Strelitzer, C. L.: A Five-Year Study of the Antibiotic Sensitivities and Cross Resistances of Staphylococci in a General Hospital, paper presented at Fifth Ann. Symp. on Antibiotics, Washington, D. C., Oct. 2-4, 1957. (5) Doniger, D. E., & Parenteau, Sr. C. M.: *J. Maine M. A.* 48:120, 1957. (6) Royer, A.: Changes in Resistance to Various Antibiotics of Staphylococci and Other Microbes, paper presented at Fifth Ann. Symp. on Antibiotics, Washington, D. C., Oct. 2-4, 1957. (7) Hasenclever, H. F.: *J. Iowa M. Soc.* 47:136, 1957. (8) Josephson, J. E., & Butler, R. W.: *Canad. M.A.J.* 77:567 (Sept. 15) 1957. (9) Rhoads, P. S.: *Postgrad. Med.* 21:563, 1957. (10) Holloway, W. J., & Scott, E. G.: *Delaware M. J.* 29:159, 1957.

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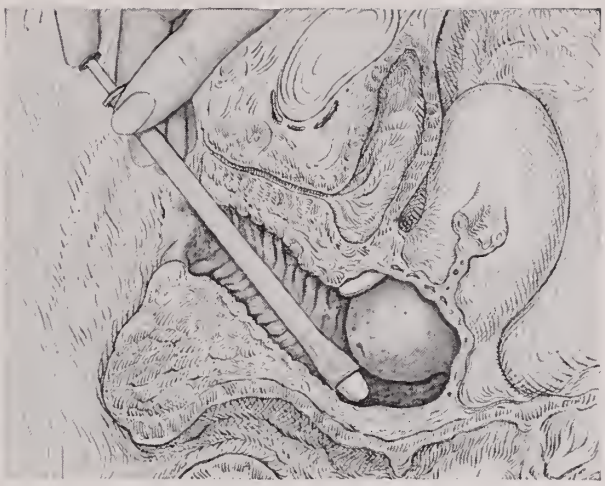
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1. Russek, H. I.: Postgrad. Med. *19*:562 (June) 1956.

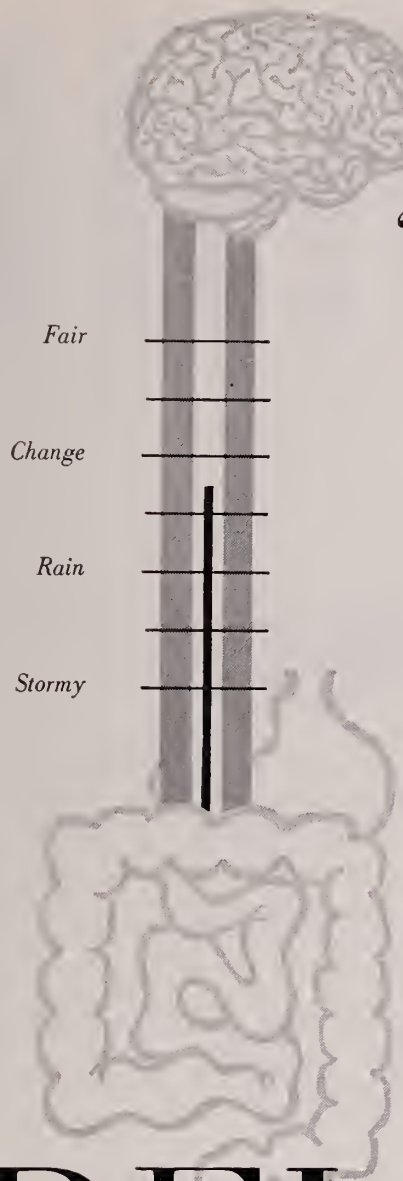
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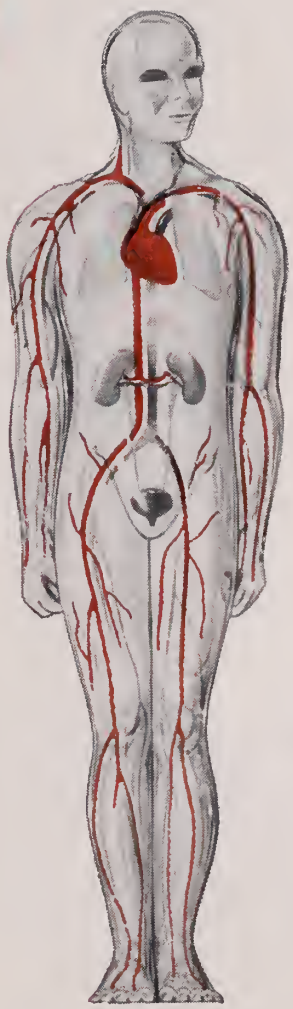
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Birth	10	10	2	3	6	320
1	12	13	2½	4	6	390
2	15	13	3	4½	6	480
3	17	9	3	5	5	520
4	20	11	3½	6	5	610
5	23	11	4	6½	5	700
6	26	10	4	7	5	760

EVAPORATED MILK FORMULAS

Age Months	Evap. Milk Fluid Oz.	Water Oz.	KARO Tbsp.	Each Feeding Oz.	Feedings In 24 Hrs.	Total Calories
Birth	6	12	2	3	6	380
1	8	16	3	4	6	532
2	9	14	3	4½	5	576
3	10	15	3½	5	5	650
4	12	18	4	6	5	768
5	12	21	4	6½	5	768
6	13	22	4	7	5	768

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References: 1. Grieble, H. C. and Jackson, G. G.: Prolonged Treatment of Urinary-Tract Infections with Sulfamethoxypyridazine. *New England J. Med.* 258:1-7, 1958. 2. Editorial *New England J. Med.* 258:48-49,1958. 3. Jones, W. F., Jr. and Finland, M., Sulfamethoxypyridazine and Sulfachloropyridazine. *Ann. New York Acad. Sc.* 60:473-483, 1957.

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— over 5000 human blood determinations after oral or intramuscular administration have consistently demonstrated fast, high, prolonged serum levels in patients of all ages.[3,5,6,7,8,9,10,11,12,13,14,15]

3 Tetrex has an impressive documented record of clinical effectiveness

— more than 170 million doses of tetracycline phosphate complex in 1957, with 5 published clinical reports by 9 investigators on 826 patients.[3,5,7,8,10] *Clinical evaluation:* "should probably be considered an improvement over, and an ultimate replacement for, the older tetracycline hydrochloride."[10]

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For Speedier Return to Normal Nutrition

Meat...

and the Medically Acceptable Reducing Diet

In any medically acceptable reducing diet prescribed today, meat can serve as an important nutritional component.

Curtailment of the daily calorie allowance must not deny the patient the protein, vitamins, and minerals required for good nutritional health. Fad diets which eliminate certain basic foods can hardly be considered medically acceptable.

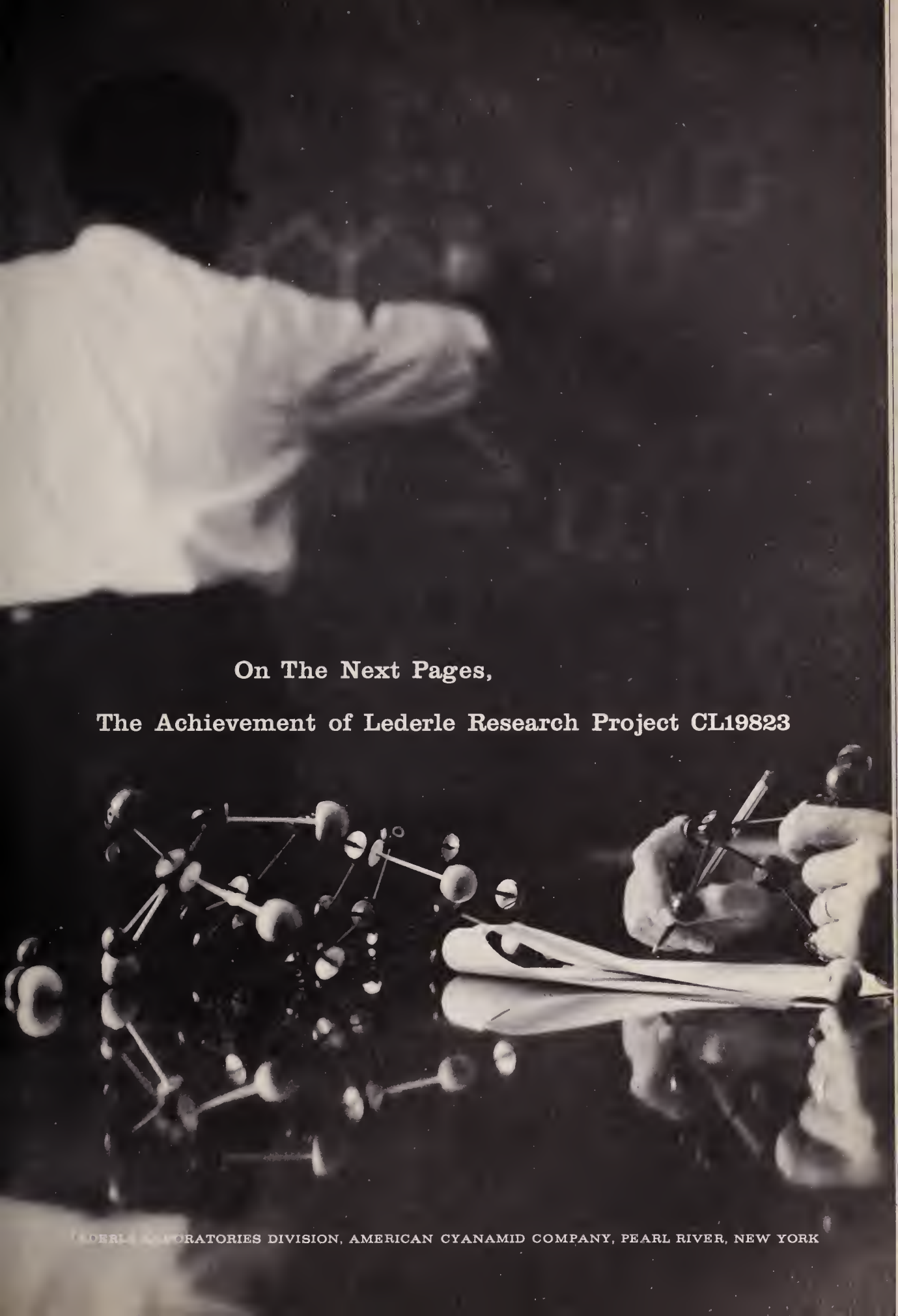
Calorie for calorie, no other commonly eaten food supplies the quality and quantity of protein which lean meat provides. Its B vitamins and minerals are needed daily, regardless of calorie restrictions.

Even when coexistent pathological conditions require that the calorie-reduced diet be further limited to foods low in fiber or in sodium, meat fills the same important place in each day's food allowance. The fat content of lean meat is relatively low, and meat can be prepared in various ways, as called for by almost every special diet.

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The nutritional statements made in this advertisement have been reviewed by the Council on Foods and Nutrition of the American Medical Association and found consistent with current authoritative medical opinion

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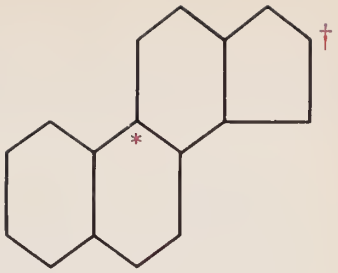
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Arist 

a new corticosteroid created to minimize
major deterrents to all previous steroid therapy



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Triamcinolone LEDERLE
9 alpha-fluoro-16 alpha-hydroxyprednisolone

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- **a new high** in anti-inflammatory effects with lower dosage (averages 1/3 less than prednisone)
- **a new low** in the collateral hormonal effects associated with all previous corticosteroids
  - No sodium or water retention
  - No potassium loss
  - No interference with psychic equilibrium
  - Low incidence of peptic ulcer and osteoporosis

Biological Effects of Aristocort

with particular emphasis on:

Kidney function

Animal studies on ARISTOCORT[1] have not demonstrated any interference with creatinine or urea clearance. Autopsy surveys of organs of animals on prolonged study of this medication have shown no renal damage.

Sodium and water

ARISTOCORT produced an increase of 230 per cent of water diuresis and 145 per cent sodium excretion when compared to control animals.[1] Metabolic balance studies in man revealed an average negative sodium balance of 0.8 Gm. per day throughout a 12-day period on a dosage of 30 mg. per day.[2] Additional balance studies showed actual sodium loss when ARISTOCORT was given in doses of 12 mg. daily.[3] Other investigators observed significant losses of sodium and water during balance studies and that those patients with edema from some older corticosteroids lost it when transferred to ARISTOCORT.[4,5] In two studies of various rheumatic disorders (194 cases) on prolonged treatment, sodium and water retention was not observed in a single case.[6,7]

Potassium and chlorides

There was no active excretion of potassium or chloride ions in animals given maintenance doses of ARISTOCORT 25 times that found to be clinically effective.[1] Potassium balance studies in humans[2,3] revealed that negative balance did not occur even with doses somewhat higher than those employed for prolonged therapy in rheumatoid arthritis. Hypokalemia, hyperkalemia or hypochloremia did not occur, when tested, in 194 patients with rheumatoid arthritis treated for up to ten and one-half months.[6,7]

Calcium and phosphorus

Phosphate excretion in animals[1] was not changed from normal even with amounts 25 times greater (by body weight) than those known to be clinically effective. Human metabolic balance studies[3] demonstrated that no change in calcium excretion occurred on dosages usually employed clinically when the compound is administered for its anti-inflammatory effect. Even at a dosage level twice this, slight negative balance appeared only during a short period.

Protein and nitrogen balance

Positive nitrogen balance was maintained during a human metabolic study on maintenance dosage of 12 mg. per day.[3] At dosages two to three times normal levels, positive balance was maintained except for occasional short periods in metabolic studies of several weeks' duration.[2,3]

There was always a tendency for normalization of the A/G ratio and elevation of blood albumin when ARISTOCORT was used in treating the nephrotic syndrome.[8]



Liver glycogen deposition and inflammatory processes

An intimate correlation exists between the ability of a corticosteroid to cause deposition of glycogen in the liver and its capacity to ameliorate inflammatory processes.

In animal liver glycogen studies, relative potencies of ARISTOCORT over cortisone of up to 40 to 1 have been observed. Compared to ARISTOCORT, five to 12 times the amount of prednisone is required to produce varying but equal amounts of glycogen deposition in the liver.[1]

Most patients show normal fasting blood sugars on ARISTOCORT. Diabetic patients on ARISTOCORT may require increased insulin dosage, and occasional latent diabetics may develop the overt disease.

Anti-inflammatory potency of ARISTOCORT was determined by both the asbestos pellet[1] and cottonball[9] tests. It was found to be nine to 10 times more effective than hydrocortisone in this respect.

Gastric acidity and pepsin

The precise mode of ulcerogenesis during treatment with corticosteroids is not known. There is much experimental evidence for believing this may be related to the tendency of these agents to increase gastric pepsin and acidity—and this cannot be abolished by vagotomy, anticholinergic drugs or gastric antral resection.[10] Clinical studies[11] of patients on ARISTOCORT revealed that uropepsin excretion is not elevated. Further, their basal acidity and gastric response to histamine stimulation were within normal limits.

Central nervous system

The tendency of corticosteroids to produce euphoria, nervousness, mental instability, occasional convulsions and psychosis is well known.[12] The mechanism underlying these disturbances is not well understood.

ARISTOCORT, on the contrary, does not produce a false sense of well being, insomnia or tension except in rare instances. In the treatment of 824 patients, for up to one year, not a single case of psychosis has been produced. In general, it appears to maintain psychic equilibrium without producing cerebral stimulation or depression.

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Lederle

The Promise of Aristocort in Reduction of Side Effects

It is axiomatic to affirm that the undesirable collateral hormone effects of corticosteroids increase in frequency and severity the higher the dosage and the longer used.

It has also become well recognized that the most serious of the major side effects from long-term corticosteroid treatment are peptic ulcers, osteoporosis with fracture, drug psychosis and euphoria, and sodium and water retention leading often to general tissue edema and hypertension.

It is significant that of the close to 400 patients on the lower dosage schedules found effective in bronchial asthma and dermatologic conditions, only 1 case of peptic ulceration has developed. No other of the above side effects have been observed even though ARISTOCORT was administered continuously to them for periods as long as one year.

The treatment of rheumatoid arthritis with steroids appears to result in the highest incidence of side effects. For this reason, the side effects associated with ARISTOCORT therapy in 292 patients with rheumatoid arthritis are reported below.

Peptic Ulcer

The occurrence of peptic ulcer in 292 patients with rheumatoid arthritis treated continuously for up to one year with ARISTOCORT is approximately 1 per cent (2 of the 3 occurred in patients transferred from prednisone). In the remaining 532 cases recently analyzed, only one ulcer has been discovered in a patient who apparently had no ulcer when he was changed from another steroid.

Osteoporosis and Compression Fractures

The occurrence of osteoporosis with compression fracture in 292 patients with rheumatoid arthritis treated continuously for up to one year with ARISTOCORT is 0.33 per cent (1 case[1]). Although these results are encouraging, determination of the true incidence of osteoporosis will have to await the passage of more time.

Euphoria and Psychosis

The euphoria so commonly produced by all previous corticosteroids has seemed a most desirable attribute to patients. In penalty, however, they have often later to pay for this by mental disturbances, varying from mild and transitory to severe depression and psychosis,[2] and toxic syndromes producing even convulsions and death.[3]

Since the onset of these complications is not directly related to duration of steroid administration,[4] the fact that not one case of psychosis occurred in 824 patients treated with ARISTOCORT, is most encouraging.

Sodium Retention—Hypertension—Potassium Depletion

When 17 patients were changed from prednisone to ARISTOCORT, 11 rapidly lost weight although only one had had visible edema.[5] Sodium and water retention, hypokalemia or hyperkalemia and steroid hypertension did not appear in 194 rheumatoid arthritis patients treated with ARISTOCORT.[1,6]

The interrelation between blood and body sodium, and steroid hypertension has long been generally appreciated.[7,8] Except in rare instances, or when unusually high doses are used (e.g., leukemia), the problem of edema and hypertension caused by sodium and water retention, has been eliminated with ARISTOCORT.

Minor Side Effects

Collateral hormonal effects of less serious consequence occurred with approximately the same frequency as with the older corticosteroids.[1] These include erythema, easy bruising, acne, hypertrichosis, hot flashes and vertigo. Several investigators have reported symptoms not previously described as occurring with corticosteroid therapy, e.g., headaches, lightheadedness, tiredness, sleepiness and occasional weakness.

Moon facies and buffalo humping have been seen in some patients on ARISTOCORT. However, ARISTOCORT therapy, in many instances, resulted in diminution of "Cushingoid" signs induced by prior therapy. Where this occurs, it may be related to reduced dosage on which patients can be maintained.

Reduction of dosage by one-third to one-half

In a double-blind study of comparative dosage in patients with rheumatoid arthritis,[9] 70 per cent of the cases were as well controlled on a dose of ARISTOCORT one-half that of prednisone. A general recommendation can be made that ARISTOCORT be used in doses two-thirds that of prednisone or prednisolone in the treatment of rheumatoid arthritis. There are individual variations, however, and each patient should be carefully titrated to produce the desired amount of disease suppression.

Comparative studies, of patients changed from prednisone, indicate reduced dosage of ARISTOCORT in bronchial asthma and allergic rhinitis (33 per cent),[5] and in inflammatory and allergic skin diseases (33-50 per cent).[10,11]

General Precautions and Contraindications

Administration of ARISTOCORT has resulted in lower incidence of major serious side effects, and in fewer of the troublesome minor side effects known to occur with all previously available corticosteroids. However, since it is a highly potent glucocorticoid, with profound metabolic effects, all traditional contraindications to corticosteroid therapy should be observed.

No precautions are necessary in regard to dietary restriction of sodium or supplementation with potassium.

Since ARISTOCORT has less of the traditional side effects, the appearance of sodium and water retention, potassium depletion, or steroid hypertension cannot be used as signs of overdosage. As a rule patients will lose some weight during the first few days of treatment as a result of urinary output, but then the weight levels off.

Patients do not develop the abnormally voracious appetite common to previous corticosteroid administration. In fact, some patients experienced anorexia, and it is advisable to inform patients of this and to recommend they maintain a normal intake of food, with emphasis on liberal protein intake.

While precipitation of diabetes, peptic ulcer, osteoporosis, and psychosis can be expected to appear rarely from ARISTOCORT, they must be searched for periodically in patients on long-term steroid therapy.

Traditional precautions should be observed in gradually discontinuing therapy, in meeting the increased stress of operation, injury and shock, and in the development of intercurrent infection.

There is one overriding principle to be observed in the treatment of any disease with ARISTOCORT. *The amount of the drug used should be carefully titrated to find the smallest possible dose which will suppress symptoms.*

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Lederle

The Promise of Aristocort in Rheumatoid Arthritis

ARISTOCORT *therapy has been intensely and extensively studied for periods up to one year on 292 patients with rheumatoid arthritis.*

Significant is the fact that most patients were *severe* arthritics, transferred to ARISTOCORT from other corticosteroids because satisfactory remission had not been attained, or because the seriousness of collateral hormonal effects had made discontinuance desirable.

Results of treatment

Freyberg and associates[1] treated 89 patients with rheumatoid arthritis (A. R. A. Class II or III and Stage II or III). Of these, 51 were on ARISTOCORT therapy from three to over 10 months. In all but a few patients, satisfactory suppression of rheumatoid activity was obtained with 10 mg. per day. Thirteen were controlled on 6 mg. or less a day, and for periods to 180 days. The investigators reported therapeutic effect in most cases to be A. R. A. Grade II (impressive) and that marked reduction in sedimentation rates occurred.

Another interesting observation in this study: Of the 89 patients treated, 12 had active ulcers, developed from prior steroid therapy. *In six patients, the ulcers healed while on doses of* ARISTOCORT *sufficient to control arthritic symptoms.*

Hartung[2] treated 67 cases of rheumatoid arthritis for up to 10 months. He found the optimum maintenance dose to be 11 mg. per day. Nineteen of these patients were treated for six to 10 months with an "excellent" therapeutic response.

Dosage and course of therapy

The initial dosage range recommended is 14 to 20 mg. per day—depending on the severity and acuteness of signs and symptoms. Dosage is divided into four parts and given with meals and at bedtime. Anti-rheumatic effect may be evident as early as eight hours, and full response often obtained within 24 hours. This dosage schedule should be continued for two or three days, or until all acute manifestations of the disease have subsided, whichever is later.

The maintenance level is arrived at by reduction of the total daily dosage in decrements of 2 mg. every three days. The range of maintenance therapy has been found to be from 2 mg. to 15 mg. per day—with only a very occasional patient requiring as much as 20 mg. per day. Patients requiring more than this should not be long continued on steroid therapy.

The aim of corticosteroid therapy in rheumatoid arthritis is to suppress the disease only to the stage which will enable the patient to carry out the required activities of normal living or to obtain reasonable comfort. The maintenance dose of ARISTOCORT to achieve this end is arrived at while making full use of all other established methods of controlling the disease.

ARISTOCORT is available in 2 mg. scored tablets (pink); 4 mg. scored tablets (white). Bottles of 30.

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1. Freyberg, R. H., Berntsen, C. A., and Hellman, L.: Paper presented at International Congress on Rheumatic Diseases, Toronto, June 25, 1957. 2. Hartung, E. F.: Paper presented at Florida Academy of General Practice, St. Petersburg, Florida, Nov. 2, 1957.

Lederle

The Promise of Aristocort in Respiratory Allergies

About 200 patients with respiratory allergies have been treated with ARISTOCORT *for continuous periods up to eight months.*

Results of treatment

Sherwood and Cooke[1,2] gave ARISTOCORT to 42 patients with bronchial asthma and allergic rhinitis. Average dose needed to control the asthmatic group was approximately 6 mg. per day (range, 2 to 14 mg.). Results, which were called "good to excellent" in all but four, were achieved on one-third less than similarly effective doses of prednisone or prednisolone.

The investigators noted other major improvements in ARISTOCORT therapy over the older steroids. There was no increase in blood pressure in any patient: *on the contrary, in 12 patients, there was reduction of pressure when they were transferred to* ARISTOCORT. One patient had required auxiliary antihypertensive drug therapy; over a nine-week period on ARISTOCORT, the pressure gradually fell from 206/100 to 136/79. In another case, the pressure slowly dropped from 205/105 to 154/86.

The number of cases in which these investigators tried ARISTOCORT in allergic rhinitis was not large enough to provide significant averages. However, the range of effective therapy was from 2 to 6 mg. per day. These strikingly low daily doses resulted in control of all signs and symptoms.

Schwartz[3] treated 30 patients with chronic, intractable bronchial asthma. At an average daily dose of 7 mg., he reported "good to excellent" results in all but one. Spies,[4] Barach[5] and Segal,[6] reported similar results at average daily maintenance doses of 4 to 10 mg. of ARISTOCORT.

Dosage and course of therapy

The initial dosage range recommended is 8 to 14 mg. of ARISTOCORT daily. Although a rare, very severe case may require more than this on the first day of therapy, these dosages will usually result in prompt alleviation of dyspnea, wheezing and cyanosis. Patients are soon able to carry out a normal span of daily activity.

The maintenance level is arrived at by reduction of the total daily dose every three days in decrements of 2 mg.; in the over-all series, the average daily dose for bronchial asthma is approximately 8 to 10 mg. and for allergic rhinitis, 2 to 6 mg. per day. All total daily doses should be divided into four parts and given with meals and at bedtime. As in every condition where corticosteroids are employed, each patient's treatment should be individualized and the maintenance arrived at by careful titration against signs and symptoms of disease.

Patients with chronic bronchial asthma may require steroid therapy for several months. And since asthma may be associated with cardiac disease, especially in the older age groups, ARISTOCORT is particularly useful because of its ability to cause excretion of sodium and water.

ARISTOCORT is available in 2 mg. scored tablets (pink); 4 mg. scored tablets (white). Bottles of 30.

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1. Sherwood, H., and Cooke, R. A.: J. Allergy 28:97, 1957. 2. Sherwood, H., and Cooke, R. A.: Personal Communication. 3. Schwartz, E.: Personal Communication. 4. Spies, T. D.: Personal Communication. 5. Barach, A. L.: Personal Communication. 6. Segal, M. S.: Personal Communication.

Lederle

The Promise of Aristocort

in Nephrotic Syndrome

Fourteen patients with the nephrotic syndrome have been treated with ARISTOCORT *for continuous periods of up to six weeks.*

Results of treatment

Hellman and associates[1,2] noted that ARISTOCORT, because of its favorable electrolyte effects, may well be the most desirable steroid to date in treatment of the nephrotic syndrome. However, thus far its use has been reported in only 14 children, of whom 8 had a complete diuresis and disappearance of all abnormal chemical findings. Four of the patients had diuresis, but continued to show some abnormal chemical findings, while two patients with signs of chronic renal disease failed to respond.

Dosage and course of therapy

In order to produce maximal response, 20 mg. should be given daily until diuresis occurs. The dose should then be decreased gradually and maintained around 10 mg. a day. After the patient has been in remission for some time, it may be advisable to diminish the dose gradually and discontinue ARISTOCORT.

in Pulmonary Emphysema and Fibrosis

Eleven patients with pulmonary emphysema and/or fibrosis were treated with ARISTOCORT *for continuous periods of over two months.*

Results of treatment

Only small series of cases observed by Barach,[3] Segal,[4] and Cooke,[5] are available. Barach treated patients who were not adequately controlled by prednisone, with the same dose of ARISTOCORT with significant improvement.

Dosage and course of therapy

The initial suppressive dose range recommended is 10-14 mg. daily. Frequently, there is a prompt decrease in cyanosis and dyspnea, with increase in vital capacity.

The average maintenance dose level was 8 mg. a day. If it is desired to maintain a patient on continuous therapy for some months, dosages as low as 2 mg. a day have been successful. All decreases in dosage should be gradual and at a rate of 2 mg. decrements in total daily amount, every two to four days. The daily dosage is divided into four parts and given with meals and at bedtime.



in Neoplastic Diseases

◊ *Forty-four children and adults have been given* ARISTOCORT *for palliative treatment of acute leukemia, chronic lymphatic leukemia, lymphosarcoma, lympholeukosarcoma and Hodgkin's disease.*

Results of treatment

Farber[6] has treated 22 children with acute leukemia for an average of three weeks. Of the 17 observed long enough to judge the efficacy of the medication, he rated five as excellent, three as good, two as fair and seven as poor responses.

Hellman and associates[7] gave ARISTOCORT to a group of patients with the various lymphomas in doses of 40 to 50 mg. a day—occasionally up to 100 milligrams. Treatment was continued in some cases for 17 weeks. Response was classified as good for the palliative purposes for which the drug was given.

Dosage and course of therapy

Massive initial suppressive doses of 40 to 50 mg. per day in children (1 mg./kg./day) and up to 100 mg. a day in adults have been administered.

Responses to any specific dosage in these conditions vary so widely that only a general dosage range can be indicated. Treatment must be individualized; rate of reduction in dosage and determination of maintenance levels cannot be categorized.

Miscellaneous

Patients with various other diseases have been treated by several clinical investigators. These include patients with osteoarthritis, acute bursitis, rheumatic fever, spondylitis, other "collagen-vascular" diseases (dermatomyositis, etc.), thrombocytopenic purpura, chronic eosinophilia, hemolytic anemia, diuretic-resistant congestive heart failures, and adrenogenital syndrome.

There have not been sufficient patients in any of the above categories to permit definitive treatment schedules to be finally established for ARISTOCORT. Additional studies are now in progress and physicians desiring information on any of these diseases are requested to write to Lederle Laboratories, Pearl River, New York for available data.

ARISTOCORT is available in 2 mg. scored tablets (pink); 4 mg. scored tablets (white). Bottles of 30.

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Lederle

The Promise of Aristocort

in Inflammatory and Allergic Skin Diseases

◯ *Over 200 patients with allergic and inflammatory skin diseases (including psoriasis, atopic dermatitis, exfoliative dermatitis, pemphigus, dermatitis herpetiformis, eczematoid dermatitis, contact dermatitis and angioneurotic edema) have been treated continuously with* ARISTOCORT *for periods of up to eight months.*

Results of treatment

Rein and associates[1] treated 26 patients with severe dermatitis. Twenty-four had been on prednisone when changed to ARISTOCORT. While some had found satisfactory symptomatic relief, others had also developed side effects—moon face, buffalo hump, increased appetite with excessive weight increases and gastro-intestinal disturbances.

These investigators determined the equivalent dosage of ARISTOCORT to be approximately two-thirds that required to control symptoms on the previous corticosteroid. Thirteen of the 26, who had developed moon face, noted either an actual decrease or no further increase when transferred to ARISTOCORT. In addition: *Voracious appetites disappeared, with loss of weight in 11 patients; there was no elevation in blood pressure, and no necessity to restrict sodium or administer supplemental potassium.* Sherwood and Cooke,[2] and Shelley and Pillsbury[3] obtained similar results in allied disorders.

Hollander[4] first observed that ARISTOCORT appears to have striking affinity for the skin and great activity in controlling such diseases as psoriasis, for which other corticosteroids have been indifferently effective. Shelley and Pillsbury,[3] in 50 cases of acute extending psoriasis found that over 60 per cent were markedly improved.

Dosage and course of therapy

The recommended initial suppressive dose range is 14 to 20 mg. per day. In very severe cases, temporary dosages up to 32 mg. a day have been successfully employed. Once lesions are suppressed, gradually reduce dose to the maintenance level—which may be as low as 2 mg. per day.

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in Disseminated Lupus Erythematosus

◯ *Forty patients with disseminated lupus erythematosus were treated with* ARISTOCORT *for continuous periods of up to nine months.*

Results of treatment

Patients have responded very promisingly to therapy. Dubois[1] has had the largest single experience (28 cases) with ARISTOCORT in the treatment of this disease. He reported 25 of the 28 responded favorably.

Freyberg,[2] Hartung,[3] Hollander,[4] Spies,[5] and Segal,[6] each in smaller series of cases, reported similarly good therapeutic responses.

Dosage and course of therapy

The initial suppressive dose recommended is 20-30 mg. daily. Once the desired effect is achieved, the dose should be reduced gradually to maintenance levels (3 to 18 mg. per day).

In severely ill patients large doses may be required for several days in order to preserve life. Even on these large doses, edema and sodium retention have not occurred.

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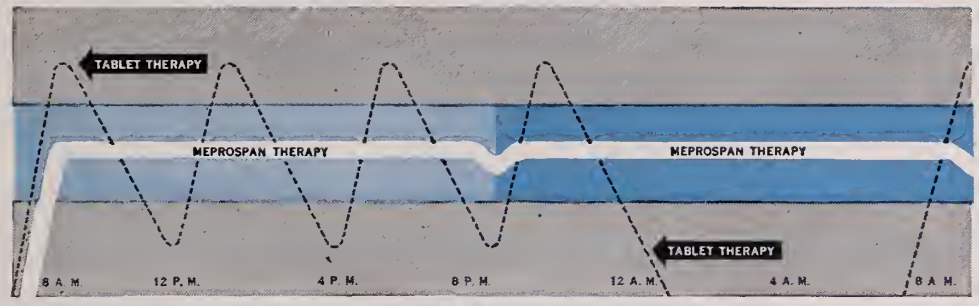
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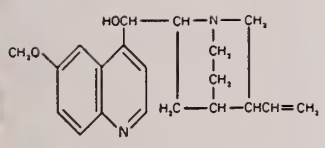
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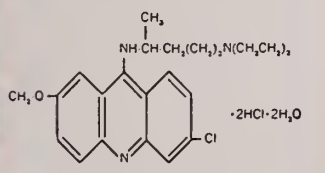
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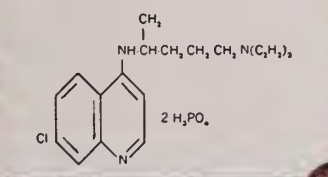
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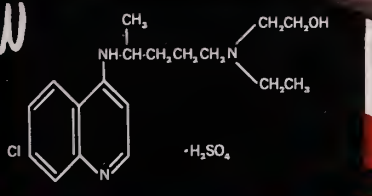
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1. Schuchter, S.L., and Harrison, J.W.: *Cleveland Clin. Quart.* 24:98, Apr., 1957.
2. [illegible], and Alexander, L.J.: The Schoch section, *Bull. A. Mil. Dermatologists* 5:25, Nov., 1956.
3. [illegible]re: Arch. Dermat. 73:572, June, 1956.

Atabrine (brand of quinacrine), Aralen (brand of [illegible]) and Plaquenil (brand of hydr[illegible]) trademarks reg[illegible]





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1. Comroe's Arthritis: Hollander, J. L., p. 149 (Fifth Edition, Lea & Febiger, Philadelphia, Pa. 1953).
2. Merck Manual: Lyght, C. E., p. 1102 (Ninth Edition, Merck & Co., Inc., Rahway, N. J. 1956).

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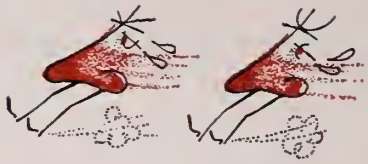
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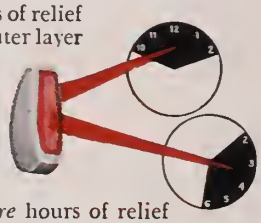
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Riseman, J. E. F., Altman, G. E., and Koretsky, S.: Nitroglycerin and Other Nitrites in the Treatment of Angina Pectoris, Circulation (Jan.) 1958.

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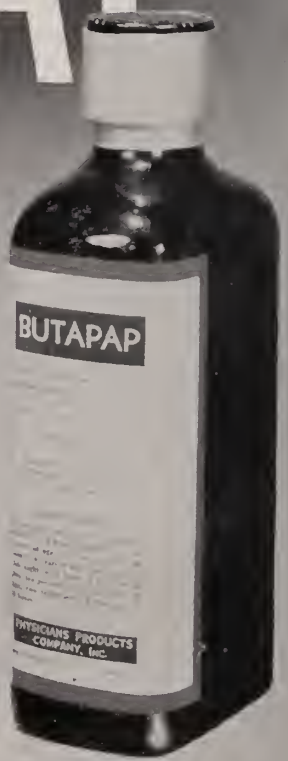
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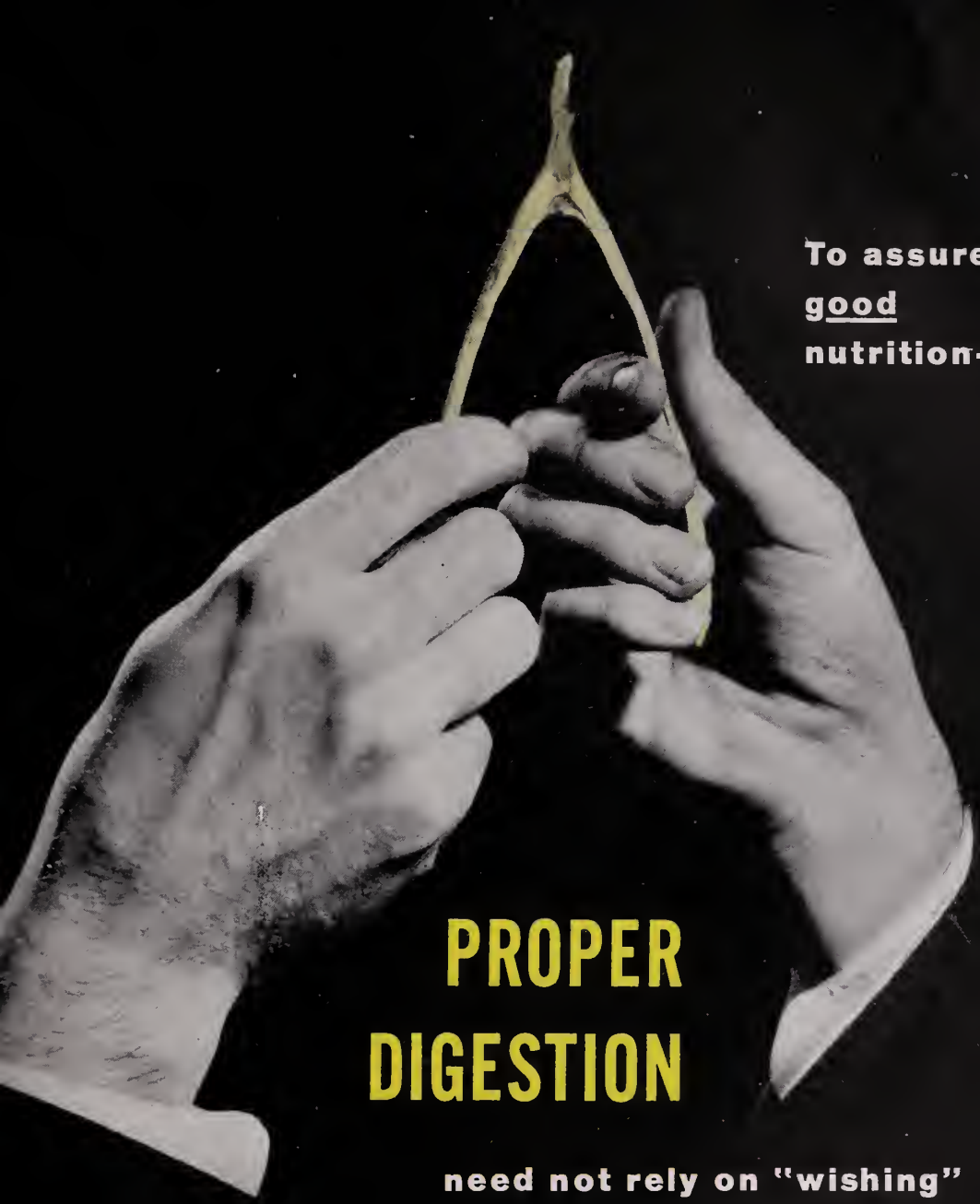
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WINSTON-SALEM N. C.

1. Proctor, R. C.: Clin. Med. 6: 717 (June) 1957
2. Proctor, H. ., Bailey, W. H. and Morehouse, W. G.: J. Am. Geriatrics Soc. (April) 1958.



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"It happened at work while he was putting oil in something"



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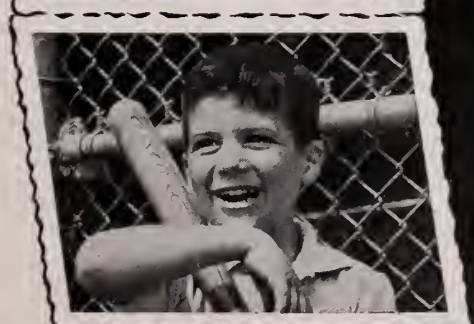
"He couldn't swing a bat without hurting"



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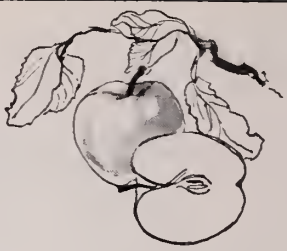
*U.S. Pat. 2,628,185



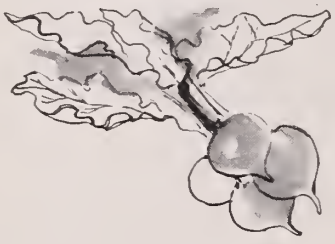
Dates



Oranges



Apples



Beets



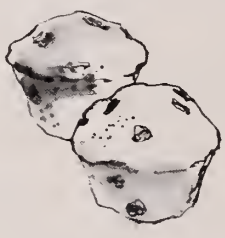
Liquids



Carrots

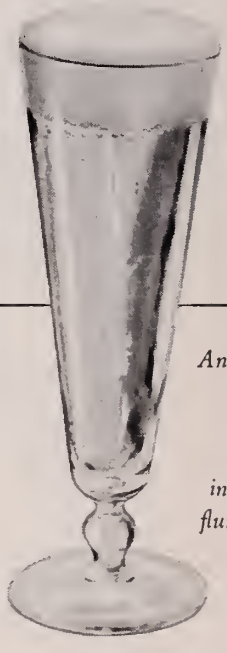


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When your patient makes these bulk-producing foods appetizing, he's likely to include them in his regular diet.

*An 8-oz. glass of beer supplies about ⅛ the minimum requirement of Niacin as well as smaller amounts of other B Complex vitamins. (Average of American beers)

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BIBLIOGRAPHY

(1) Noojin, R. O.: South. M. J. 49:149, 169:1379, 1956. (3) Goldman, L.; Flatt, 25:75, 1955. (4) Frank, L., and Stritzler, (5) Robinson, R. C. V., and Robinson, (6) Canizares, O.; Shatin, H., and Rosen 1955.

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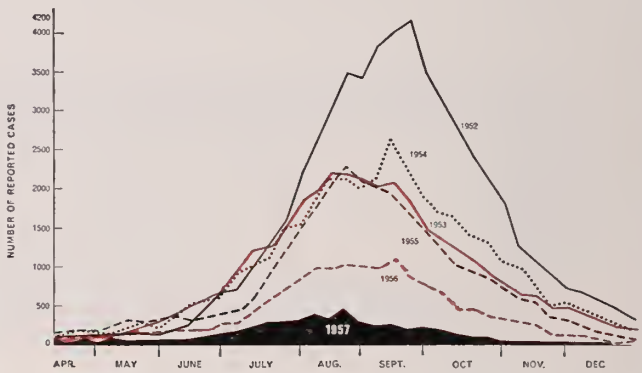
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1. J. A. M. A., 165:*21* (*November 23*), *1957.*

2. Department of Health, Education, and Welfare: News Release, October 10, 1957.

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The Virginia
MEDICAL
MONTHLY

May, 1958
Vol. 85, No. 5
Whole No. 1272

Guest Editorial....

The Shape of a State of Mind

A RICHMOND DOCTOR, who is interested in such matters as his state retaining her traditional character, recently made a little study for the purpose of defining the reasons why the citizens of non-traditional states seem to lack the strong consciousness of identity with a land. His purpose was by no means superficial. He was concerned with the absence of sympathy from these states for our deep awareness of place.

We know, for a fact, that their indifference amounts to an impatience, and they are impatient essentially of something they do not understand. If it is true that, as a Frenchman said, "To understand all is to forgive all," it would follow that we have been the subject of very little effort at understanding.

If we were ourselves French, or something even more strange and remote, we might be treated with that half-contemptuous tolerance that is extended a people who are frankly not understood, and considered, indeed, to be beyond the realm of one's understanding. But, as fellow Americans, the citizens of distant states assume that we should not defy their understanding; assuming that we *should* be like them, they extend us neither the tolerance accorded the strange nor the sympathy of the understood.

My doctor friend, then, sought an explanation for this attitude on the part of fellow Americans. We know why we are and they know why they are, and it has been our assumption that, since we were the original American society and our westward continental co-habitants extended from the social structures we had built, that it devolved on them to understand their differences and deviations from us—not us from them. We were wrong in this assumption, and for a fundamental reason. Since this republic was dedicated to the rule of the majority, it has come to follow that the majority is right—and we just ain't the majority.

The "we" in this case extends from Virginia specifically to include all the traditional societies that were formed more or less contemporaneously, evolved with similar histories and ideals, and existed for two centuries together as the "old America". These traditional societies geographically embrace the Atlantic Coastal states and, while the dominant majorities of population in most of these areas could scarcely have less in common with an old America, there are segments even in New York City, as an example, whose characters, standards, and attitudes are similar to those of Virginians'. But these segments of traditionalists in the hugely populous metropolitan centers are the least fashionable of all minorities; and in those New England states where the

traditionalists do dominate, the total population is so small as to make them (as Vermont and New Hampshire) no more influential by volume than Virginia and South Carolina and the delta country of Mississippi. In effect, the total *we* of the traditional society is, in the continental sweep of America, a slim rearguard of a vanishing time.

One element which all of us considered to characterize our difference from the new America was that we remembered. We extended from what had gone before—generations in a single parish, centuries in a single county, the life span of America in a single state. All traditional societies share all the flaws of rich memories: some people substitute the inertia of living on memories for the vigor of meeting the present; when enough of them make this spineless indulgence the society declines and the Visigoths come in. But America's traditional societies are relatively too young for the folded hands to have blocked the continual emergence of individual dynamism, and the total culture has been enriched by guardians of the past rather than seriously blighted by non-doers, with the result that a heritage has been shared that influences the formation of each individual.

Yet, this element of memory, of perpetuity, seems insufficient to explain the chasm between us and the new states. We still think of them as deviating *from* us, branching off from a common root and influenced by different conditions. But this would not explain why, in their changes, the people were almost totally devoid of place identification for themselves and dismissing of it in others as a sickness to be cured of. This dismissal of it in others is certainly not true of all individuals from the new states (I've known some who became among the country's most devout traditionalists), but the attitude characterizes their vocal, voting majority.

Specifically for this, the doctor's theory is that those states are geographically evenly drawn rectangular or square slices of territory. Look at a map: their borders are drawn in straight lines as political sub-divisions of the national real estate development. The states did not evolve geographically within the area formed by natural boundaries and cultural developments.

Virginia has the Atlantic Ocean, traditionally its border and connective with Europe; it has the Potomac, its border with the North; its border with North Carolina was a matter of very careful study in the early eighteenth century; even its border with West Virginia, though drawn by the drunken surveyors of a political war party, more or less followed (except for the two northern Valley counties) the natural cultural lines between the states. In that case, under the impact of national upheaval, man remedied the mistakes of nature in forming the boundaries; but, those boundaries, even more than the Potomac and the Atlantic, express a very real division that had developed between cultures.

On these physical alignments, the doctor believes that the citizen's identification with his state is strongly influenced by that state's geographic formation. Into my generation, any Virginian was aware of crossing its borders. More than 100 years ago, Confederate soldiers re-crossing the Potomac after the invasion of the North, spoke of returning to "the sacred soil" and "the blessed land" of Virginia. Their state was, for them, a sharply defined place—as Ireland was for the Irish, as the British finally found out after 400 years of trying to convince the Irish that they were British.

But, riding on a train to the Coast, who knows what state boundaries he has crossed? How do the natives know? For days, each place is like each place.

In California, they tell you that all the retired farmers living in the Los Angeles area are Iowans. This can not be true. Iowa came to suggest a section. In my personal acquaintance, five Iowans who are extremely successful in New York (among them

the editor and publisher of *McCalls* and Ted Gallup, the founder of the modern poll) were not remotely similar to the people inhabiting Riverside, California; but, then, neither were my friends distinguished by being Iowans: they were distinguished by being successful. In other words, Iowa suggested a type in which Iowans did not necessarily fit. But, in not fitting a type, the successes had ceased to be Iowans.

This would never be true of a Virginian. Nor could Virginia ever be used to characterize a type. It would be far-fetched to claim that a state could not represent a general type only because of its physical shape, but along with other reasons—known and intangible—the doctor certainly has a point in his theory that *states of mind* are very different in those states that were formed by natural boundaries, of geography and culture, and in those that were simply sliced out of the public domain.

CLIFFORD DOWDEY

Editor's Note: Mr. Dowdey is Editor of the Virginia Record and this editorial, which appeared in their February 1958 issue, is reprinted in the Monthly with the permission of the Executive Editor.

Emotional or physical strain may play an important role in triggering an attack of rheumatoid arthritis, according to the publication "Patterns of Disease," prepared by Parke, Davis & Company for the medical profession. The publication reports on a study in which 144 patients with rheumatoid arthritis described factors precipitating their disease. Emotional or physical strain, or both, amounted to a high of 42 per cent of the incidence of all factors reported, and infections to 26 per cent. Exposure to dampness or cold accounted for only 16 per cent.

Rheumatic disease, which afflicts an estimated one out of every 16 Americans, causes more disability than all accidents combined, according to the publication "Patterns of Disease," prepared by Parke, Davis & Company for the medical profession. Close to three million persons have been forced to change their occupation or give up normal activity; 1,500,000 are partially disabled; 218,000 are completely disabled, and 320,000 are unemployable. Persons with rheumatic disease lose an average of 15 working days each year, "Patterns" reports.

Rheumatic disease ranks second only to mental illness in the amount of disability it causes, but "with early and proper treatment crippling can be prevented in 70 per cent of patients" afflicted with the disease, according to the publication "Patterns of Disease," prepared by Parke, Davis & Company for the medical profession. It cites results of a "before-and-after" study of 1,538 patients. Prior to rehabilitation, their total annual earnings amounted to $312,000. After rehabilitation, their annual earnings soared to $2,600,000—more than eight times as much as previously.

Anticoagulants, Theoretical Considerations and Laboratory Control

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Senior cardiologist of one of the largest medical schools in London: "I cannot agree with you about anticoagulants, as I do not give rat poison to my patients."
Owren, P. A.: "We think that permanent anticoagulant therapy affords protection against renewed embolization in patients with rheumatic heart disease and against infarction and death in cases with angina pectoris or recent myocardial infarction."

ANTICOAGULANTS have an established place in prophylaxis and therapy of thrombotic states. It is of interest to note that thrombotic tendency is one of those rare conditions in which results of laboratory examinations are of no help in diagnosis, but are essential for controlling the therapy.

Drugs used in such conditions may be divided into two groups. Direct acting drugs, such as heparin, influence the blood coagulation in vivo and in vitro. Indirect acting anticoagulants, which do not influence the clotting of blood in vitro, form the second group represented by dicumarol and its derivatives. Dicumarol acts in vivo by decreasing the production of a number of coagulation components. Thus, heparin which is given by injection, acts as soon as it appears in the circulation. Dicumarol, on the other hand, acts only after a period of time during which the production of certain clotting components is inhibited. The duration of activity of each derivative of dicumarol depends on the rate at which it is metabolized, and the time during which it persists in the liver.[1]

Heparin is a polysulphuric acid ester of a mucopolysaccharide. Its activity depends mainly on its strong acid charge. Because of the difference in concentration in commercial preparation, it is preferable to determine the dose of heparin in units of activity, rather than in milligrams or mililiters. Heparin is eliminated from the circulation at a rate of 3-5 units/kg./minute, mainly by destruction in tissues by the enzyme, heparinase, formed in the liver and kidneys.[2] When large doses are injected, the excess is excreted by the kidneys. Heparin is particularly effective immediately after thrombosis, not only as an anticoagulant, but also because of its vasodilatory effect. It aids in overcoming the spasm of the surrounding blood vessels, a reaction frequently more damaging to the organ than the localized thrombus, itself.

The coagulation time of whole blood is affected by heparin and is used as the most reliable method in evaluation of the anticoagulant effect of heparin. In addition, the amount of heparin injected will influence the prothrombin time, bleeding time and thromboplastin generation for a short period of time.

Dicumarol and its derivatives exert a complex influence on the clotting mechanism. The first dose given usually decreases the concentration of Plasma Thromboplastin Component (PTC), or Christmas Factor, and as a consequence, reduces the thromboplastin formation. This effect cannot be measured by the prothrombin time. PTC depression is soon followed by a decrease in Factor VII[3] (also known as stable factor or proconvertin). Factor VII deficiency is the main cause for the prolongation of the prothrombin time during dicumarol therapy. Stuart Factor,[4] a newly isolated component, is the next in sequence to be decreased. The concentration of prothrombin is affected at a later time. The effect of dicumarol at that stage is readily apparent in the Quick one-stage prothrombin time. Factor V level is influenced only by profound dicumarolization. (Fig. 1)

In addition to its anticoagulant activity, dicumarol combats thrombosis by decreasing the adhesiveness of platelets[5] and increasing the speed of recanalization in the thrombosed blood vessels. These properties make this drug particularly effective in the later stages of treatment of thrombosis.

The detrimental effect of discontinuation of anticoagulant therapy in a patient with coronary thrombosis is well presented in figure 2.[6]

Anticoagulants are contraindicated in patients with hemorrhagic tendencies, generalized or local bleeding, especially in the gastro-intestinal tract, retina,

Presented at the annual meeting of The Medical Society of Virginia, Washington, D. C., October 27-30, 1957.
From the Department of Clinical Pathology, Medical College of Virginia.

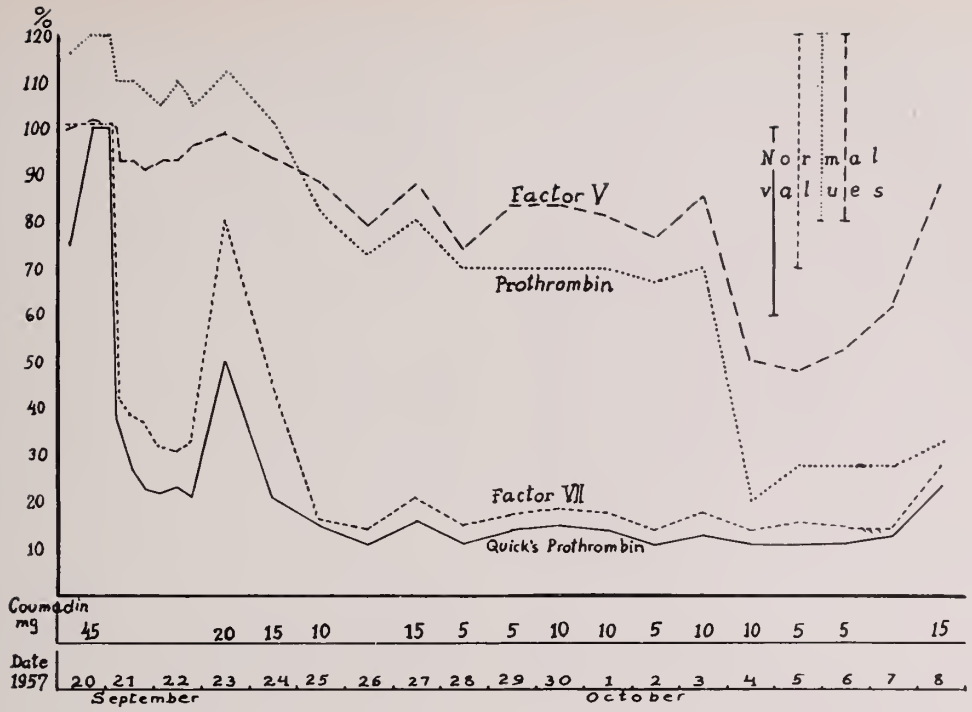
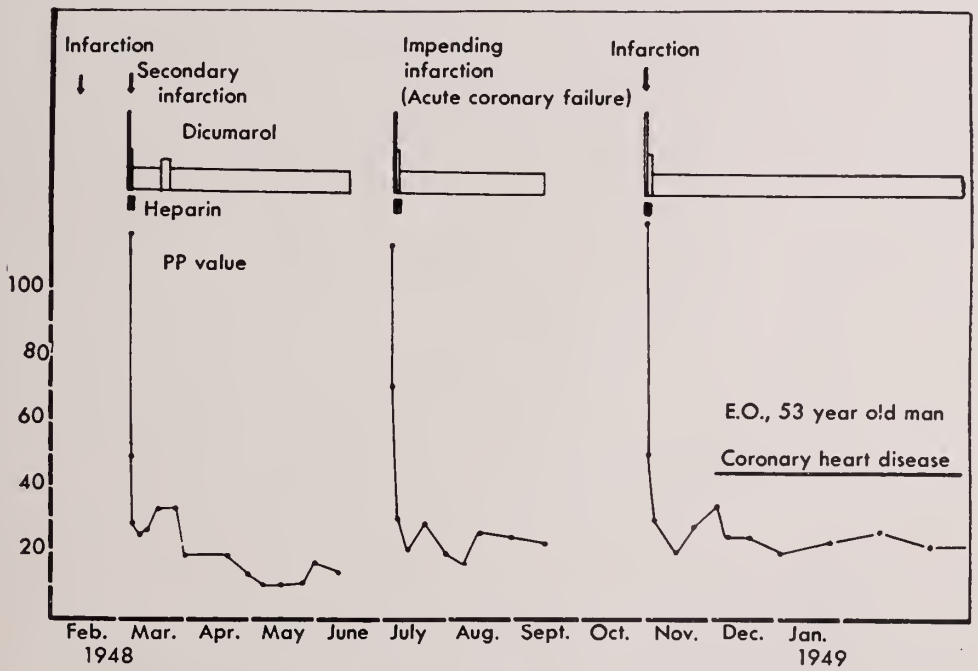


Figure 1.

central nervous system, in patients with malignant hypertension, periarteritis nodosa, and liver or kidney dysfunction.

The laboratory estimation of the effectiveness of the anticoagulant drugs is simpler in heparin than in dicumarol therapy. One of the reasons is that the dose of heparin administered in that minimal quantity which prolongs the clotting time two or three-fold when measured by Lee & White's method. Dicumarol, on the other hand, is given in a maximal dose capable of reducing the coagulation components just above the brink of bleeding.



Relapse of coronary thrombosis (impending infarction and frank infarction) a few weeks after discontinuation of anticoagulant therapy. Owren, P.A.: Postgrad. Med., 21:1, 84, 1957.

Figure 2.

Seldom does one reach a two to three-fold prolongation of the clotting time on heparin therapy, when the coagulation time is determined before the next injection of heparin. Concentrated preparations injected intramuscularly are particularly worthy of recommendation. However, even when given in large doses, they will rarely prolong the coagulation time two or three-fold, even for 12-24 hours, in spite of the fact that their anticoagulant activity persists longer. This observation limits the usefulness of an accurate evaluation of clotting time in patients on heparin therapy—except for the prevention of overdosage. The coagulation time is technically simple to perform, yet is subject to marked inaccuracies, most commonly tending to shorten the clotting time. Technically faulty venipuncture and improperly cleaned test tubes are the leading causes of error.

Dicumarol is effective only when given in large doses, short of causing bleeding. This makes it imperative to follow its effect with a test capable of determining which patients have a tendency to bleed. Quick's one-stage prothrombin time, used for this purpose for over 20 years, has proven to have great clinical value. The test, according to Dr. A. Quick, "suffered mostly from improvements". These modifications were introduced due to an unpredictability of bleeding which may be a result of a number of factors among which, the technic of prothrombin determination is of importance.

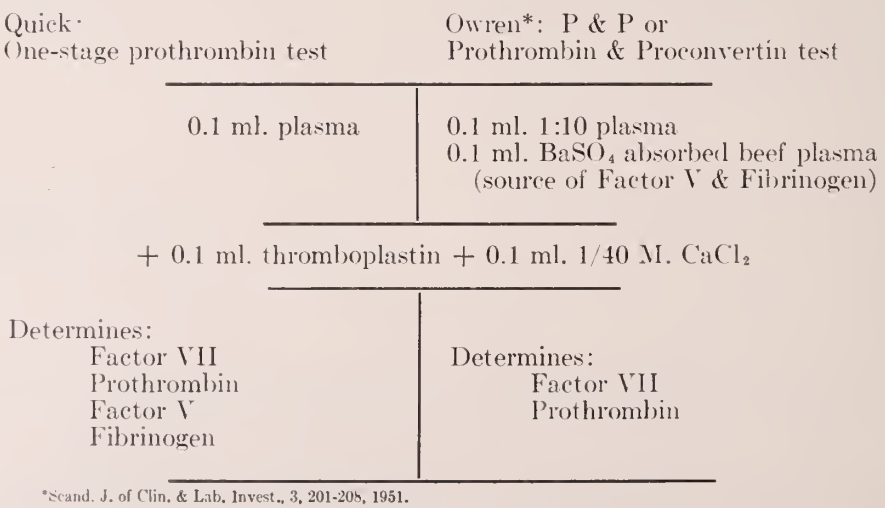
Among the technical reasons limiting the reliability of this test is the presence of small clots in the improperly drawn blood sample—this may cause wide variations in the prothrombin time. Deviation of the temperature of the water bath from 37°C. or of calcium chloride concentration from 1/40 molar solution produce error, as does the strength of the thromboplastin preparation which may vary from batch to batch. In a blood sample kept over 2 hours after collection, the Factor V will deteriorate if oxalate is used as an anticoagulant while the Factor VII will be activated by the use of citrate as an anticoagulant. The method of reporting the results of the test may also be misleading. When two figures are given for the clotting time of control and patient's plasma, it takes at times the skill of a good mathematician to determine the tendency of the change, particularly since both normal and patient's plasma clotting times vary from day to day. The use of percentage of activity in reporting is more simple to evaluate but may vary from laboratory to laboratory. It does not reflect the true rate of change of the clotting time. Among the many modifications, the most promising is that of Owren[7], which is widely accepted. In this modification a combined estimation of Factor VII and prothrombin is achieved by the addition of prothrombin-free Factor V and fibrinogen rich, beef plasma, to diluted patient's plasma.* This is followed by the determination of the clotting time after the addition of calcium chloride and thromboplastin. (Fig. 3)

This method has, in my opinion, a number of features to be preferred over the original Quick one-stage method.

It is not affected by:

1. Small amounts of heparin,
2. Variations in individual batches of thromboplastin, and

*All reagents necessary for the performance of this test are commercially available (Hyland Laboratories, Los Angeles, California).



*Scand. J. of Clin. & Lab. Invest., 3, 201-208, 1951.

Figure 3

3. Random changes in Factor V and fibrinogen which are not influenced by dicumarol.

4. It is more sensitive to changes in the two factors influenzed by dicumarol (VII and prothrombin), and thus, reflects better the action of dicumarol.

5. It indicates earlier and more reliably the deviation from normal and tendencies toward abnormality, and

6. Shows a closer correlation with the dosage of drug given.

7. Samples of plasma can be shipped by mail for a period of time up to four days without affecting the results. This latter fact may be responsible to some extent for the observation that investigators using this test have fewer hemorrhagic complications during long term dicumarol therapy than those who use Quick's one-stage prothrombin time.

Even this improved test measures only two factors, while dicumarol influences a number of others, among them thromboplastin generation, capillary fragility and platelet adhesiveness—none of which are reflected in the prothrombin time.[8]

In order to evaluate the day by day response of the patient to dicumarol, a chart showing graphically the relation of change in prothrombin time or concentration to the daily dose of drug may be of practical value. (Fig. 4)

Treatment with anticoagulants should be directed by experienced physicians with particular interest in this field.

The sensitivity of the patient to various anticoagulants may change while on treatment due to a number of conditions. The sensitivity to heparin may increase due to a decrease in platelets which have an antiheparinic activity. Liver damage may result in a lowered production of heparinase and kidney damage may cause a faulty excretion of heparin, both leading to a dangerous accumulation of the drug.

A patient may become more sensitive to dicumarol if the diseased liver produces less of the Factor VII and prothrombin. The faulty metabolism of the drug in such conditions has also an influence on the sensitivity.

An apparently decreased sensitivity to dicumarol may actually be due to faulty absorption of the drug from the intestines due to diarrhea, change in the gastro-intestinal bacterial flora due to prolonged

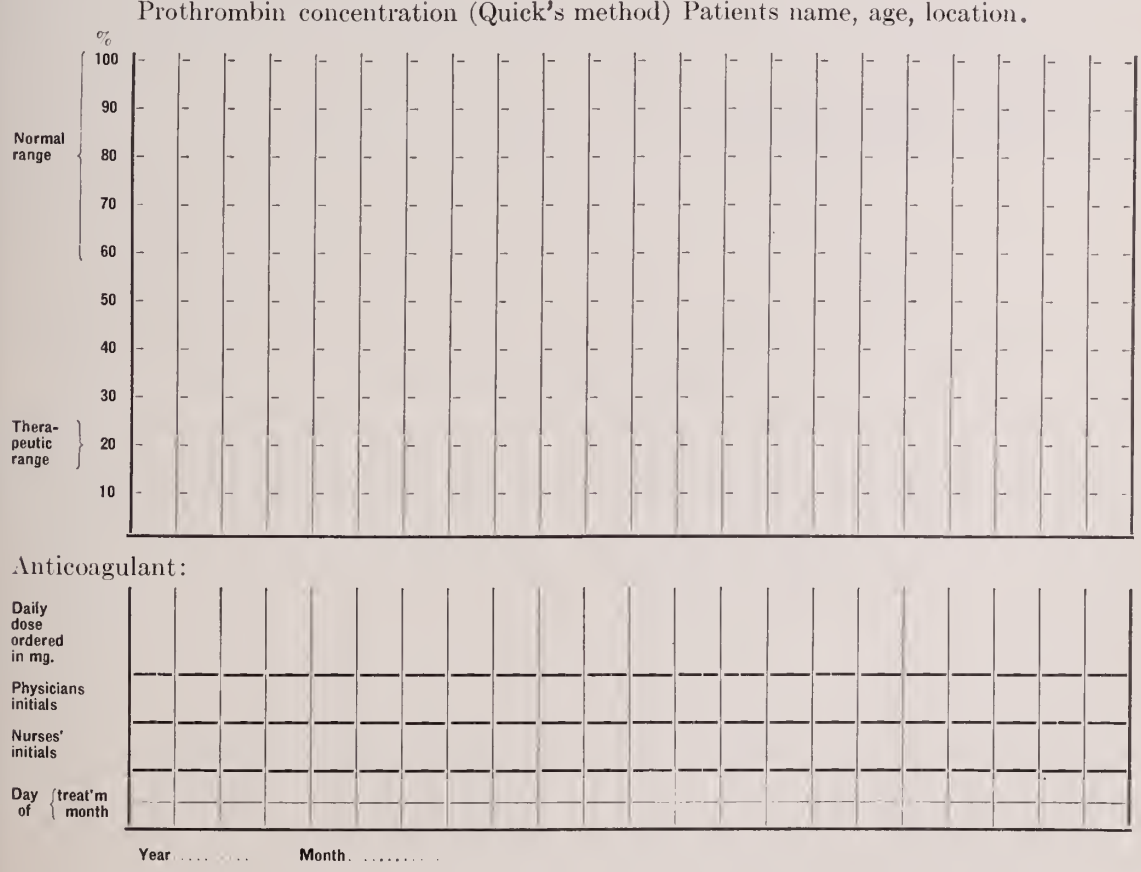


Figure 4

therapy with antibiotics, intercurrent acute illnesses, alcohol intake, menstrual cycle, emotional stress, or to concurrent treatment with drugs such as salicylates, and sulfonamides which tend to increase the activity of dicumarol.

Overdosage of anticoagulants results in bleeding. Slight hematuria is usually the first sign to appear and will disappear on withdrawal of the drug. Severe generalized or localized bleeding should be treated with coagulants in addition to discontinuation of the drug. In case of overdosage of heparin, intravenous injection of protamine sulfate will neutralize the excess in a matter of minutes. The overdosage of dicumarol is best treated with Vitamin K. Vitamin K_1, given intravenously, in an oil emulsion will act as soon as two hours after injection. It is the treatment of choice in such conditions. Blood transfusions are less effective. Because Vitamin K_1 is fat soluble, bile and pancreatic lipase are needed for its absorption, thus, oral administration of Vitamin K_1 is not effective in cases of obstructive jaundice. The bulk of the preparation is carried by the lymphatic system into the general circulation, while only a small amount is transported through the liver. The water soluble Vitamin K_3 acts faster when injected intravenously, than when given orally. It is transported through the liver on oral administration, and absorbed without the help of bile and pancreatic lipase. These properties influence the type of Vitamin K to be used. Both types are excreted in the urine where breakdown products can be detected.

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Problems of Aging

A series of articles dealing with various health problems of the aging have been reprinted in booklet form from The Journal of the AMA. Four of the 11 titles in the series are: "The Oldster and His Doctor;" "Stress and Exhaustion;" "Rehabilitation and Restorative Services," and "Preparation for Retirement Is a *Must*." Copies of the booklet are available on request from the AMA's Council on Medical Service.

Prophylactic Anticoagulant Therapy Following Myocardial Infarction

JAMES B. TWYMAN, M.D.
Charlottesville, Virginia

THE PATHOGENESIS of coronary atherosclerosis is unknown. Fairly clear cut evidence has been presented that not only male gonadal hormones, but also phospholipid and cholesterol metabolism are factors contributing to atherosclerosis of the heart.[1,2,3] However, once a patient has suffered a coronary occlusion, how to prevent a recurrence is a question which cardiologists and other members of the medical profession have been studying for many years.

Anticoagulants have been used for acute myocardial infarction for thirteen years. This mode of therapy is well established[5]. More recently, several investigators have been employing anticoagulants on a prophylactic bases. Observations on this mode of therapy have required considerable length of time.

Now we should consider this plan of treatment objectively. In order to do this, there are three pertinent questions, namely: (1) What is the life expectancy in the treated and untreated cases? (2) What is the incidence of recurrent coronary occlusion and/or thrombo-embolic disease in each group? (3) What are the hazards and drawbacks of long term anticoagulant therapy?

The question of life expectancy with and without anticoagulant therapy are shown in tables 1 and 2.

TABLE 1

SURVIVAL RATES FOLLOWING MYOCARDIAL INFARCTION

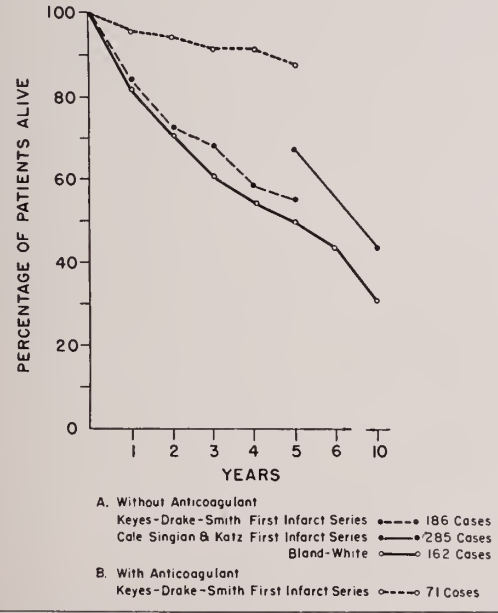
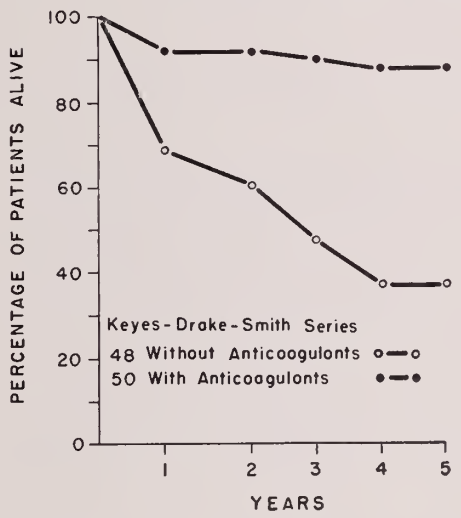


TABLE 2

SURVIVAL RATES FOLLOWING RECURRENT MYOCARDIAL INFARCTION



To express this data in another fashion; after the first myocardial infarction, the patient who is not on long term anticoagulant therapy has a mortality rate two or three times that of the patient receiving anticoagulants. In those subjects having more than one occlusion, i.e. recurrent infarcts, the mortality rate of the untreated is approximately six times that of treated subjects. Three other separate observers have reported similar results in small series of cases.[4,6,8]

The question of recurrence of either myocardial infarction and/or thrombo-embolic episodes varies with the observer. Table 3 shows comparison of three different series. All are first infarcted patients. In Keyes' series,[7] the incidence was six times greater in the subjects not receiving anticoagulants. In a somewhat comparable series reported by Foley,[4] (though some of the results have to be interpolated

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by the undersigned), the rate of recurrence was ten times. In Suzman's study,[8] the incidence was three times that of the treated subjects.

Though the figures quoted in the preceding paragraph are impressive, Bland and White's series of 162 patients reveal that during the first decade, fifty-eight or thirty-five per cent died of "coronary insufficiency".[10] Nine of the fifty patients who had survived ten years had had a recurrent coronary occlusion. The incidence of probable recurrent closure of a coronary vessel in this group was forty-one per cent. All of these patients were seen and treated prior to anticoagulant therapy. The longest survival in this series was twenty-five years.

TABLE 3

A Comparison of the Recurrence of Myocardial Infarction and/or Thrombo-Embolic Episodes in Patients Receiving Long Term Therapy with Comparable Patients Not Treated.*

Authors of Series	Treated With Anticoagulants			Not Treated With Anticoagulants			Ratio of Treated to Not Treated
	Number of Patients	Number of Episodes	% of Total	Number of Patients	Number of Episodes	% of Total	
Keyes-Drake-Smith	121	7	5.8	234	89	38.0	1:7
Foley-Wright	12	1	8.3	12	10	83.3	1:10
Suzman-Ruskin-Goldberg	82	7	8.4	88	24	27.4	1:3

* All Series Treated and Not Treated Were First Attack Cases Only.

TABLE 4

ABSOLUTE CONTRA-INDICATIONS TO ANTICOAGULANT THERAPY

1. Hemorrhagic diatheses, particularly blood dyscrasias.
2. Central nervous system bleeding or ulcerative lesion therein.
3. Gastro-intestinal hemorrhage or ulceration.
4. G. U. ulceration or bleeding.
5. Bacterial endocarditis.
6. Late pregnancy.

RELATIVE CONTRA-INDICATIONS TO ANTICOAGULANT THERAPY

1. Biliary obstruction.
2. Hepatic insufficiency.
3. Renal insufficiency.
4. Open wounds.
5. Post operative tube drainage of wounds or viscera.
6. Renal calculi.
7. Alcoholism.
8. Personality instability.
9. Unreliable laboratory.

The contraindications to the use of anticoagulants have been listed in table 4. Various authorities, who are experts in this field, have reported that hemorrhage occurred in about twenty-five per cent of the patients. The actual mortality rate from hemorrhage is small, about two per cent or less. The effect of the anticoagulants can be controlled within a few hours time by the use of Vitamin K_1 or K_1 Oxide, 20 to 200 mgs. by mouth or, if needed, these medications can be administered intravenously. Fresh whole blood will also have a similar effect. Transfusions can be used for blood replacement if needed. Figure 1 demonstrates not only the use of Vitamin K_1, but also the rebound and prolonged action of Dicumarol, lasting over a period of ten days with hematuria persisting for seventy-two hours.[11]

Patients who have begun long term anticoagulant therapy and who have either on their own initiative or for other reasons had to discontinue their treatment, have shown a high incidence of myocardial infarction following withdrawal of the anticoagulants.[8] Nichol et al reported that thirty per cent of approximately 1100 subjects started on this mode of treatment have eventually discontinued it.[6] Toxic and/or allergic reactions have occurred with the various anticoagulants, notably Phenindione.[12,13]

Two other considerations deserve comment: first, the cost of laboratory fees and medications, per annum, amounts to a minimum of $125.00. Secondly, the better medical attention and the selection of patients suitable for prophylactic anticoagulants are intangible factors not only difficult to evaluate, but also not subject to statistical analysis.

CONCLUSION

Long term anticoagulant therapy in patients with myocardial infarction is of value in selected cases, particularly, if auricular fibrillation and/or thromboembolic accidents complicate the picture. The cases selected for treatment require careful and close medical attention by a physician who is thoroughly familiar with these drugs. Most of the complexities of this mode of therapy have been considered. How-

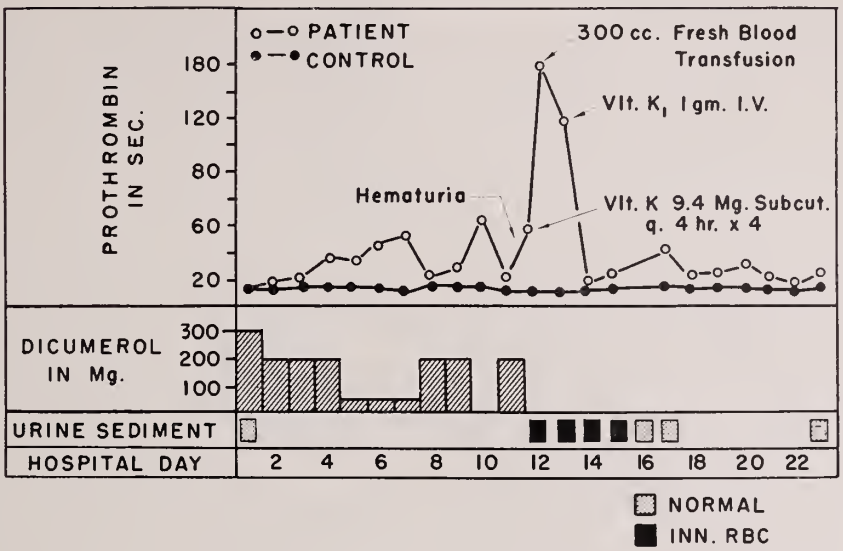


Figure 1.

ever, further carefully controlled study on a large scale such as that in progress by Nichol et al[6] is needed in order to properly evaluate prophylactic anticoagulant therapy following myocardial infarction.

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Ectopic Pregnancy

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THE MATERNAL MORTALITY in Virginia has decreased from fifteen deaths in every two thousand deliveries in 1928, to one maternal death in every two thousand deliveries in 1956. Your Committee on Maternal Health meets at regular intervals and investigates every maternal death in Virginia. In 1956, fifty-two maternal deaths were reported in Virginia, an incidence of one maternal death in every 2,000 live births, the lowest total loss and the lowest maternal mortality rate ever reported in this State.

Unfortunately, deaths due to ectopic pregnancy have not decreased, and they consequently account for a higher per cent of the total maternal deaths. In 1956, ectopic gestation caused 11.5 per cent of the maternal deaths in Virginia, 7.5 per cent in North Carolina, 11 per cent in Georgia, and 11 per cent in Florida. It is evident that the less frequent causes of maternal deaths require more study if we want to continue to decrease maternal loss.

We believe the number of women who die as a result of the complications of pregnancy can be decreased more than fifty per cent if all pregnant women will seek medical care early in pregnancy and if the physicians will do careful pelvic examinations on all pregnant patients and on women who have failed to menstruate and who present themselves for medical care. The patients must return for regular antepartum visits, follow instructions, and report any unusual symptoms or conditions.

At the second annual clinical meeting of the American Academy of Obstetrics and Gynecology, in December, 1953, we reported 222 cases of ectopic pregnancy admitted to the Medical College of Virginia Hospitals from January 1, 1945, through December 31, 1952, a period of eight years. Only one patient died in this series, giving a mortality rate of 0.4 per cent.

Today, we wish to report 226 cases of ectopic gestation admitted to the Medical College of Virginia Hospitals in the four years since January 1, 1953. No maternal death occurred in this group of patients. During this four year period, 29,391 pregnant patients were admitted to the Medical College of Virginia Hospitals, an incidence of one ectopic pregnancy in every 130 cases of pregnancy. No attempt will be made to review the literature, as we have done this in several other papers.

The diagnosis of ectopic pregnancy is frequently difficult to make, but the careful physician will be able to diagnose correctly most of the cases if he will remember, first that ectopic gestation can occur in any woman who is exposed to the possibility of pregnancy during the child-bearing age; and second, that a careful history with particular emphasis on the regularity of the patient's menstrual cycles and on the symptoms associated with her last three or four menses or with episodes of bleeding is extremely important. Frequently, the patient with an ectopic pregnancy will have a little vaginal bleeding or pelvic pain during the early weeks of the gestation, and she attributes these symptoms to an abnormal or delayed menstrual period. Actually, her symptoms are very different from those associated with her usual menstrual cycle. The amount of flow, type of pain, and the time at which these occurred are all usually abnormal if the patient has an ectopic gestation.

One must remember that less than twenty per cent of patients with ectopic pregnancies are first seen with symptoms of pain, fainting, and shock. The patient who has a leaking ectopic pregnancy may not go into shock, but she usually has a unilateral pelvic mass, sometimes a hematoma in the posterior cul-de-sac, pelvic pain or tenderness, a slight elevation of temperature, a rapid pulse, and anemia. Pelvic inflammatory disease, appendicitis, ovarian cysts, degenerating myomatas, urinary tract disease, and gall bladder disease must be ruled out in many patients suspected of having an ectopic pregnancy.

Sixty-three, or 27 per cent of the patients in this

From the Medical College of Virginia Hospitals, Richmond, Virginia.

Presented at the Annual Meeting of The Medical Society of Virginia, Washington, D. C., October 29, 1957.

report were white, and 163, or 73 per cent were Negro. Approximately one-third of our obstetrical patients are white and two-thirds are Negro. One-third of the patients were not residents of Richmond and they were referred to the hospital because of suspected pelvic pathology.

Table I. Age

Age Years	Number of Patients	Per cent
Under 20	6	2.6
20 - 25	54	23.8
25 - 30	74	32.7
30 - 35	48	21.2
35 - 40	35	15.4
40 or over	9	3.9

AGE

Table I shows that 77.7 per cent of the patients were between the ages of 20 and 35 years, and only 2.6 per cent were less than 20 years old.

Table II. Parity

Para	Number of Patients	Per cent
0	51	22.5
1	66	29.2
2	46	20.3
3	25	11.0
4 or more	38	16.8

PARITY

Fifty-one patients, or 22.5 per cent were pregnant for the first time. Thirty-eight, or 16.8 per cent had been pregnant four times or more; seven patients gave histories of previous ectopic gestations. One of these had a plastic operation on her fallopian tube after a previous ectopic, and a third ectopic pregnancy for her is included in this report, giving a total of eight previous ectopic gestations in seven patients.

The ectopic pregnancy was located in the right fallopian tube in 127 cases, 56 per cent, and 95, or 42 per cent were in the left tube. Four were located outside the fallopian tubes.

At the time of operation, twenty patients, 8.8 per cent, were found to have tubal abortions with considerable hemorrhage. In thirty patients, 13.2 per cent, the fallopian tube had not ruptured, and in one-hundred and sixty-five patients, 73 per cent, the tube had ruptured. Two patients had ovarian pregnancies.

A careful and complete history is most important in making a diagnosis of ectopic gestation, and an accurate history of the three or four most recent menstrual cycles or of episodes of pelvic pain and vaginal bleeding is essential.

Table III. Menstrual History

Number Weeks Since Last Menses	Number of Patients	Per cent
0	3	1.32
1	5	2.22
2	5	2.22
3	7	3.09
4	18	7.96
5 to 8	68	30.08
8 to 12	84	37.16
12 or more	26	10.00
Unknown	10	4.44

MENSTRUAL HISTORY

As shown in Table III, thirty-eight women, or 16.81 per cent of the patients stated their symptoms first occurred within four weeks after the last menstrual flow. In a former study of a similar group, we found the onset of symptoms occurred a little later, but both studies reveal an early onset of pelvic pain and vaginal bleeding in most patients. In the patients we are reporting at this time, 75.0 per cent, or three out of four patients were first treated by us during the second or third month of pregnancy. Only 14.0 per cent were twelve weeks or more pregnant.

Table IV. Pain

Type Pain	Number of Patients	Per cent
No Pain	7	3.0
Shoulder pain	40	17.6
Dull ache	70	30.9
Cramp	62	27.4
Sharp with fainting	40	17.6
Sharp without fainting	72	31.8

PAIN

In Table IV, we show that pelvic pain is the most common complaint of the patient with an ectopic pregnancy, and ninety-seven per cent of the patients in this study had pelvic pain. In other studies of patients with ectopic pregnancies, we have found that 98 per cent or more had pelvic pain. The onset of the pain is frequently sudden, and twenty per cent of all patients state the pain was first associated either with defecation (12 per cent) or urination (8 per cent). Pain associated with fainting occurred in seventeen per cent of the patients. This emphasizes the danger of waiting for a history of fainting or shock before making a diagnosis of ectopic pregnancy. The patient with an ectopic pregnancy usually consults a physician because of pelvic

pain, vaginal bleeding, or an irregular menstrual cycle.

Table V. Vaginal Bleeding

Type	Number of Patients	Per cent
No bleeding	55	24.3
Abnormal menses	24	10.6
Spotting	44	19.4
Intermittent bleeding	40	17.6
Continuous slight bleeding	43	19.0
Profuse bleeding	16	7.0
Clots small (diameter 1cm. or less)	19	8.4
Clots large	5	2.2

VAGINAL BLEEDING

Table V reveals that 24 per cent of the patients had no vaginal bleeding, and we have found in other studies that never more than three out of four patients with ectopic pregnancies have vaginal bleeding.

Table VI. Temperature on Admission

Temperature °F	Number of Patients	Per cent
Below 99	113	50.0
99 to 100	85	37.6
100 to 101	18	7.9
101 to 102	7	3.0
102 to 103	0	0.0
103 or above	2	0.8
Not recorded	1	0.4

BODY TEMPERATURES

A slight, if any, elevation of temperature is characteristic of ectopic pregnancy. Table VI shows that the admission temperature was below 99°F in fifty per cent of the patients, and below 101°F in ninety-five per cent of the entire group of patients studied. Salpingitis, appendicitis, and urinary tract infections usually cause a higher elevation of the temperature.

Table VII. Pulse Rate

Pulse Rate on Admission	Number of Patients	Per cent
Below 80	30	13.2
80 to 90	62	27.4
90 to 100	32	14.0
100 to 110	35	15.4
110 to 120	14	5.1
120 or above	53	23.4

PULSE RATE

We think the pulse rate is particularly significant if the tube is leaking or a frank rupture has occurred. Table VII shows that the pulse rate was below 80 per minute in only 13 per cent of the patients, and above 90 in 58 per cent of the entire group.

Table VIII. Hemoglobin

Hemoglobin—Grams	Number of Patients	Per cent
0 to 4 grams	1	0.4
4 to 6 grams	9	3.9
6 to 8 grams	22	9.0
8 to 10 grams	60	26.5
10 to 12 grams	79	34.9
12 to 14 grams	46	20.3
14 grams or above	9	3.9

HEMOGLOBIN

In this study, the hemoglobin was below twelve grams in 74 per cent of the patients at the time of admission, and was usually much lower when repeated one to three hours later.

BLOOD CELL COUNT

In a few patients, three per cent, the red blood cell count was below two million, but in a high per cent of the patients there was a red cell count below the usual average for patients admitted to the Medical College of Virginia Hospitals. The white blood cell count was below 10,000 in 34.9 per cent of the patients and below 15,000 in 66.7 per cent of all the patients.

Table IX.
Length of Time in Hospital Before Operation

Time	Number of Patients	Per cent
Less than 2 hours	44	19.4
2 to 6 hours	79	34.9
6 to 12 hours	16	7.0
12 to 24 hours	20	8.8
24 to 36 hours	22	9.7
36 to 48 hours	17	7.5
3 days	10	4.4
4 days	4	1.7
5 days	5	2.2
6 days	11	4.8

Nineteen per cent of the patients were operated upon within two hours after admission to the hospital, and 54.3 per cent within six hours (Table IX). We think that early diagnosis not only saves lives, but decreases the amount of blood necessary for transfusions.

Table X. Transfusions

Transfusion of whole blood	Number of Patients	Per cent
No Transfusion	49	21.6
500cc.	45	19.9
1000cc.	48	21.2
1500cc.	45	19.9
2000cc.	34	15.0
2500cc.	4	1.7
3000cc.	1	0.4
4000cc. or over	1	0.4

TRANSFUSIONS

Table X shows that 78 per cent of the patients received whole blood transfusions. One patient received 5,500 cc. of whole blood and responded well. Fifty-eight per cent of the patients were given 1000 cc. or more of whole blood.

The purpose of this paper is to emphasize the importance of ectopic pregnancy as a cause of maternal deaths and to show that the diagnosis of this complication can be made by a physician who takes a good history, does a careful physical examination, including a bimanual examination, and uses a few simple laboratory procedures. Frequently, the history alone enables one to make a correct diagnosis. In a smaller per cent of patients with ectopic pregnancies, a bimanual pelvic examination and a few simple laboratory tests will be necessary to confirm the diagnosis.

Most patients with ectopic pregnancies are first seen by a general practitioner, or a medical man. These men have a good record for correct diagnoses. We should continue to train our medical students and interns in the importance of a complete history and a careful, thorough examination.

Unfortunately, several recent papers on ectopic pregnancy have attempted to stress the routine use of culdoscopy, needle aspiration, and opening the posterior cul-de-sac in making a diagnosis of ectopic pregnancy. In the 226 patients we are reporting, one or more of the three procedures listed above were used on four patients and resulted in a correct diagnosis only twice. We agree with TeLinde that culdoscopy may be a useful procedure when ectopic pregnancy is suspected and positive signs and symptoms are absent. Needle aspiration of the posterior cul-de-sac, and colpotomy may be useful procedures in selected cases. We have rarely considered them necessary, and our results have improved since we have been able to diagnose ectopic pregnancy without these procedures.

Table XI.
Maternal Deaths Due to Ectopic Pregnancy
Medical College of Virginia Hospitals

	Mortality Uncorrected		
	Number Patients	Number Deaths	Per cent
1930-39 inclusive (10 years)	150	12	8.0
1940-44 inclusive (5 years)	115	2	1.7
1945-52 inclusive (8 years)	222	1	0.4
1953-56 inclusive (4 years)	226	0	.0

Table XI shows no maternal mortality in two-hundred and twenty-six cases of ectopic pregnancy during the past four years, and only one death in four-hundred and forty-eight patients during the past twelve years. It also shows the decrease, during the past twenty-seven years, in mortality due to ectopic pregnancy in seven-hundred and thirteen patients.

SUMMARY

Ectopic pregnancy can be diagnosed in most cases if a complete history is taken and the patient is examined carefully.

There are two distinctly different types of ectopic pregnancy, (I) the acute type with severe pain, frequent fainting, or shock and evidence of severe acute hemorrhage and (II) the leaking or neglected ectopic whose tube may have ruptured several days before the patient seeks medical care or enters a hospital. She usually has a pelvic mass, pelvic tenderness, a rapid pulse, anemia and a slight elevation of temperature.

Pain is the most common complaint of the patient with an ectopic gestation.

Bimanual pelvic examination should be gentle. Manipulation of the cervix usually causes severe pain in the patient with a tubal pregnancy. A unilateral tender mass was found in over one-half of our patients.

The hemoglobin, red cell count, and white cell count have been of value in our questionable cases and particularly useful in the differential diagnosis.

Early diagnosis and early operation are essential in reducing mortality. The patient with an ectopic pregnancy should be operated upon as soon as the diagnosis can be made.

Oxygen should be given all patients in shock and any patient with an unstable blood pressure, or rapid pulse rate.

Blood for transfusion should be available quickly. The patient's blood can usually be Rh and group typed by the time the operation can be started. The hemorrhage should be controlled quickly and the

patient transfused with an amount of blood equal to the volume she has lost.

We have reported two-hundred and twenty-six consecutive patients with ectopic pregnancies admitted to the Medical College of Virginia Hospitals during the past four years, with no maternal death.

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DISCUSSION BY JAMES G. SITES, M.D., WASHINGTON, D. C.:

Dr. Ware and his colleagues have again brought to our attention the importance of making the diagnosis of ectopic pregnancy followed by adequate treatment. The results of his series are superb and he is to be congratulated on them. This and his previous papers on ectopic pregnancy should make us pay particular attention to what he is saying and has accomplished.

I, too, would like to stress the importance of an accurate history in making the diagnosis of an extrauterine pregnancy. It has been our experience that practically all patients will have had some menstrual irregularity if questioned carefully. Pain with menstrual irregularity constitutes the most important ectopic signs and symptoms. The patient often pinpoints the onset of pain as to time and specific location. Another feature which frequently appears is that the patient has been previously treated for a pelvic infection or other diagnosis before an ectopic pregnancy is considered.

The finding of shock is most important but must always be evaluated with the history as we have recently had two patients with acute pancreatitis who presented themselves in shock. A finding stressed to our staff is that of evidence of anemia out of proportion to external blood loss. One of the most valuable signs to determine this is the tongue sign or the pallor beneath the tongue and this is of particular value in the colored patient.

I agree completely with Dr. Ware as to the routine use of culdoscopy, culdoscentesis, and posterior colpotomy. The culdoscope is used only on rare occasions. Needle aspiration has been of little if any value and has misled us to a point of near disaster for several patients.

At one time posterior colpotomies were frequently performed for diagnosis and treatment when there was a wave of enthusiasm for vaginal excision. After several failures this was discontinued except in the most questionable cases. With the vaginal excision, pelvic abscess was a frequent complication unless a penrose drain was left in place.

Again, Dr. Ware is to be congratulated on the prompt treatment of his patients in this series. I would like to re-emphasize the importance of prompt surgery and blood replacement. I cannot agree with those who advocate delay whether it be to correct shock or await shock before surgery. At the time of surgery, the ovary can be preserved most of the time and in some patients it becomes advisable to do a tubal plasty of some type in an effort to retain the childbearing function.

Ectopic pregnancy still accounts for a high percentage of maternal mortality. Undoubtedly there will always be an occasional death from what is referred to as the coroners ectopic. One cannot hope to reduce the others until the index of suspicion, or ectopic awareness, is raised to such a point that we believe any female in the childbearing years could have an ectopic pregnancy.

Symposium on Otosclerosis

I. Developments in Otology Leading up to Stapes Mobilization

With Special Reference to Historical Research

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OTOLOGISTS have been intrigued with the restoration of hearing for over a hundred years. In 1855, Rinné described his fork tests for hearing, showing that air conduction was greater than bone conduction in the normal individual. Today this test is the basis for our evaluation of actual and residual hearing. When combined with the Weber and Schwabach tests, conductive and perceptive hearing losses can be differentiated.

Surgical efforts to improve hearing were made in Europe from 1875 to 1888. Operations[1,2] were performed by incision through the ear drum, removal of the tympanic membrane, removal of adhesions affecting the mobility of the ossicles, removal of various ossicles, and finally mobilization of the stapes. Boucheron[3] and Miot[4] were pioneers in mobilization. The latter made detailed reports of the surgical technique and his results. However, the procedure was soon abandoned.

Passow in 1896, Jenkins in 1912 and Barany in 1914 tried and abandoned fistulization of the labyrinth. Holmgren[5] of Sweden in 1937, followed by Sourdille[6] of France, performed a two stage fenestration with some success. Holmgren was the first to experiment with methods to prevent closure of the fenestrated window. Lempert[7] developed a one stage fenestration procedure and research projects in related fields. It is of interest that he described a technique for tympanosympathectomy.

Rosen[8] developed the stapes mobilization using the same approach described by Lempert in exposing the tympanic cavity for tympanosympathectomy.

Surgical advances were antedated and paralleled by advances in the physiological concept of hearing and the histology of the diseased ear.

This paper and the four following were presented at Thirty-eighth annual meeting of the Virginia Society of Ophthalmology and Otolaryngology, Roanoke, December 6-8, 1957.

Guild[9], Wever[10], Lawrence[11], and Be'ke'sey[12] made contributions. Lempert[13] refuted the pressure and decompression theory advanced by Holmgren and Sourdille. He concludes, "That the hearing improvements following fenestration are the results of remobilization of the perilymph by air borne sound with a difference in intensity and phase in the two windows."

The literature of the twentieth century is filled with the histology of the relatively common condition causing conduction deafness, namely otosclerosis. Otto Meyer[14] in 1917, P. Manasse[15] in 1922, and M. H. Weber[16] in 1933 are worthy examples. Dr. Stacy Guild became interested in serial sectioning and staining of sections through the petrous portion of the temporal bone. He developed a staining method and contributed much to the scientific knowledge of otosclerosis and deafness.

Nager[17], Meyer[18], Anson[19], Best[20], Cahill[21], and Wolf[22] are a few of the contributors to our pathologic concept of otosclerosis.

Otosclerosis is a primary disease of the inner ear capsule, characterized by resorption of normal bone and concomitant replacement with spongy bone in various plaques throughout the bony capsule of the labyrinth. These changes occur around the haversian system on the side toward the labyrinth. In addition the interglobular spaces containing cartilage are replaced by bone. There are sites of predilection for these changes, which tend to have a parallel development in both labyrinths. A frequent site is the anterior margin of the oval window. Here the bone formation may be initiated in cartilaginous plaques, which if at all marked tend to involvement of the annular ligament and fixation of the stapes. The ankylosis of the stapes causes the characteristic hearing losses observed in otosclerosis.

Cahill recognized two pathologic types of osseous

growth in otosclerosis: I. A pink colored bone, due to an affinity for eosin, with thick osteoid beams and small marrow spaces. 2. A deep blue hematoxylin staining osteoid bone consisting of a network of bony beams with large marrow spaces. He believes these types of bone represent the pathology of the slow and rapidly developing types of otosclerosis, rather than early and late phases in the disease process. Finally, the bone assumes a lamellar arrangement, the corpuscles are peripherally arranged, fibrous tissue replaces blood vessels and cells to form the marrow spaces.

Cahill also recognizes other pathologic changes which are due to involvement at other sites. Type I bone may penetrate the capsular wall of the labyrinthine endosteum. Clinically, the initially lengthened bone conduction becomes decreased and tinnitus usually increases. Primary vestibular involvement may occur with vertigo as a direct symptom.

Otosclerosis like lesions have been reported in the malleus, incus, and stapes. Also, they occur at other sites within the petrous portion of the temporal bone, usually close to the tympanic cavity.

It is common knowledge that long standing cases of otosclerosis may develop a superimposed perceptive hearing loss. The cause and relief of which have been variously proposed. It is of interest histologically to note the work of Crowe[23], Baylor, and Polvogt who have correlated the occurrence of high tone losses with changes in the organ of Corti within the basilar portion of the cochlea. An abrupt high tone loss indicates not only an atrophy of the nerve to the basal coil but also degeneration of Corti's organ.

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II. Histopathological Activities Which Influence Mobilization Procedures

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A THOROUGH KNOWLEDGE of the variations in anatomy and the histopathological activities occurring in the oval window area is essential in order that the otologist may effect better and lasting results from mobilization surgery, for unlike the fenestration operation, stapedial mobilization involves consideration of a structure of variable size, shape, consistency, angulation, depth and of variable pathological focus and infiltration. All of these factors will influence the otologist's judgment as to the best method of attack in mobilizing the stapes, whether it be by the indirect method with the sharp pointed mobilizer placed on the capitulum of the stapes or the lenticular process of the incus, or whether it be by the direct approach using the chisel or probe at the rim of the footplate or the monopodal or bipodal crurotomy approach.

Much work has been contributed to the literature regarding histopathological variations at the footplate by Ruedi of Zurich, Fowler, Guild, and others. More recently Farrior has presented some very interesting work in photography through the operating microscope depicting these variations and correlating them with preoperative hearing tests, operative procedure employed, and postoperative results. Farrior's work has been so illuminating that I have felt it worthy of passing along in this paper.

STAPES ANATOMY

Footplate
1. Superficial
2. Deep

Crura
1. Upright
2. Uptilt
3. Downtilt

In consideration of these variables one can easily realize that the superficial, upright stapes is more accessible and, therefore, more easily mobilized. Contrarily, the deep downtilted stapes is unfavorable for mobilization, both because of less accessibility of the footplate and because of the proximity of the crura to the cochlear promontory. Occasionally the head of the stapes may be fixed to the promontory due most likely to inflammatory changes or trauma. Mobilization in these cases would most likely fail due to reoccurrence of the fibrous adhesions. Thickness of the crura must be considered since occasionally they are thin and malleable necessitating the footplate approach.

PATHOLOGY

Histopathological activities in the region of the oval window are variable, and while the site of predilection of otosclerotic focus is at Cozzolino's zone or the niche anterior to the footplate, there are several different ways in which the footplate may be bound down, influencing one's choice of operating procedure. We, therefore, must consider and look for the following possibilities as causes of stapes fixation:

1. Otosclerotic focus in the niche anterior to the anterior crus. Occasionally anterior fibrous adhesions may grow across the promontory from the anterior border of the oval window. These may be due to inflammatory changes or to otosclerosis. Anterior footplate otosclerosis is favorable to stapes mobilization either by the indirect approach or by the chisel or mobilizer at the annulus of the footplate placed anteriorly. This is accomplished providing the otosclerotic focus is not too thick or extending high on the anterior crus. Thick fibrous adhesions are unfavorable to mobilization since reunion of fibrous tissue is likely to recur.
2. *Otosclerotic focus at the posterior footplate:* Again this is a favorable type for mobilization and the footplate may be freed with the chisel or mobilizer providing the lesion is relatively thin.
3. *Anterior Crus:* Occasionally hyperostosis, exostosis, and otosclerosis extends high on the anterior crus. Fowler has shown that it is relatively impossible to mobilize these stapes at the stapedial annulus in entirety. Most likely there is a fracture through the normal thin bone of the stapes posterior to the focus, associated with a fracture of the anterior crus.

These are best handled by anterior crurotomy to prevent reunion of the crural fragments. Sound then is conducted into the oval window by way of the posterior fragment of the footplate and an intact posterior crus.

4. *Posterior Crus:* The posterior crus is involved in a relatively large number of cases. These are unfavorable for successful permanent mobilization in that it becomes increasingly difficult to perform crurotomy and fracture of the footplate anterior to the focus. Then too, one loses the advantage of the hinge like ligament attached posteriorly to the footplate.
5. *Anterior and Posterior Crus:* Bipolar otosclerotic involvement extending to, and on both crura, is inoperable and the patient should not be subjected to stapediolysis procedure since the danger of labyrinthitis is increased and lasting results are not likely to occur. Likewise, cervical otosclerosis is inoperable. Extensive invasion of the footplate occasionally occurs and mobilization attempts are fraught with danger of labyrinthitis and irreversible loss of hearing.
6. *Calcification of the Annular Ligament has been observed.* These would respond best to the chisel technique at the annulus margin, alternating with the indirect method of mobilization.

Extensive invasion resulting in thick lesions of otosclerotic focus make for a less favorable result.

In summary then, good lasting results are not likely to occur in extensive, bi-crural, vascular otosclerosis, nor are they likely to occur in cicatrization, adhesive processes or downtilted crura. Better results will be obtained by thorough inspection of the footplate area under high magnification, following tympanotomy, which influence the method of choice in effecting permanent stapes mobilization. Further studies are essential including, histopathological analyses, preoperative audiometry, operative photography, procedure employed for mobilization, and postoperative results in order to pool enough information so that we may predict the character of ankylosis prior to operation. If and when this is accomplished, poor results from unfavorably ankylosed stapes will be avoided and these patients will benefit from the fenestration operation in an increasing percentage of cases.

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Professional Courtesy

The typical doctor treats about 2 per cent of his patients on a "professional courtesy" basis, according to the April 14th issue of Medical Economics. And if he's a specialist, this figure rises to about 5 per cent.

The magazine recently asked more than 1,000 doctors about their habits in granting professional courtesy to non-M.D.s. The above findings appear in the first of several articles based on this survey.

Such courtesy care is usually "limited to persons in professions allied to medicine, to close friends and relatives, and to clergymen," Medical Economics reports. The article contains eight tables showing the percentages of respondents who make no charge, give discounts, or charge full fees for 36 specific kinds of non-M.D. patients.

Highest on the no-charge list are doctors' own office workers (95 per cent of the respondents said they give their employes free care). Medical students get full professional courtesy from 87 per cent of respondents; clergymen of their own faith, from 78 per cent of the respondents; nurses they've worked with, from 66 per cent; and the family dentist, from 62 per cent.

Nearly all the surveyed doctors said the kind of service rendered—whether a routine office visit or major surgery—has no bearing on whether professional courtesy is granted. "Once the typical doctor decides to extend professional courtesy to an individual, he extends it all the way." "If he doesn't charge his dentist's wife, say, for treating her cold, he won't charge her for even the most time- and energy-consuming operation."

III. Indications and Contraindications For Stapes Mobilization

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IT IS INTERESTING to recall that 10 years ago this month many of us were attending this meeting at the Medical College of Virginia and Dr. Julius Lempert was one of the guest speakers. One of Dr. Lempert's subjects was "Fenestration Procedure" and in another talk on "Tympanosympathectomy", he described an approach to the middle ear that Dr. Samuel Rosen was to use 6-7 years later for the mobilization procedure. I wonder what another 10 years will produce in the treatment of the otosclerotic.

My portion of this symposium has to do with the indications and the contraindications for stapes mobilization. In reviewing the literature since Rosen's original case reports in 1953, it seemed wise to divide the indications into general and audiometric.

The first consideration must by necessity be the establishment of a diagnosis of otosclerosis with a presumption of stapes footplate fixation. The clinical diagnosis of otosclerosis is made in the presence of:

1) conductive deafness
2) history of progression
3) a. normal external ear
   b. normal ear canal
   c. normal tympanic membrane
   d. normal middle ear and nasopharynx.

The diagnosis is rarely possible under 18 years of age since progression is difficult to ascertain. The diagnosis may be made in advanced age but is much more frequent in the young adult.

The history is quite important in diagnosing the otosclerotic. Other than the slow progression of the deafness the patient will usually have noticed a roaring tinnitus. The patient will note that he hears well over the phone. The patient will note that he hears better in a noisy environment than in a quiet one. The patient generally volunteers the information that a hearing aid works well or is entirely too noisy. Most patients with a conduction hearing loss will have a quiet low voice.

Having established the presumptive diagnosis of otosclerosis with stapes fixation we proceed to the tuning fork test and the audiometric studies. Bone conduction is greater than air conduction by the 512 and 1024 forks. The tuning fork placed in the center of the forehead will laterize to the poorer ear. Dr. Howard House has said that any patient with a conduction deafness, with a history of progression, with a negative ear, nose and throat examination and who hears the 1024 tuning fork by bone longer than by air is a candidate for a mobilization. The audiogram confirms the bone conduction to be better than air conduction. The audiometric indications for stapes mobilization include:

1) All patients with a 30 decibel or greater air conduction loss and normal to 15 decibel bone conduction loss.
2) All candidates suitable for fenestration.
3) All patients with mixed deafness and a 15 decibel air bone gap in at least three frequencies—even those with a bone conduction loss up to 45-50 decibels.
4) Patients with unilateral hearing loss suggestive of stapes fixation.

Contraindications to the stapes mobilization procedure are infrequent once the previously stated indications are confirmed. Probably the most frequent contraindication is external canal disease. It is recommended that the patient should refrain from wearing a hearing aid mold for several weeks prior to surgery since there is almost invariably a certain degree of local inflammatory reaction to the canal mold. It is obvious that any inflammatory middle ear or nasopharyngeal disease should be a contraindication. Most certainly an upper respiratory infection is a contraindication.

Any systemic disease or other local disease which the consultant feels might complicate a local procedure, which can be temporarily very disturbing, has to be considered as a possible contraindication.

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Emotional instability and psychiatric disease is a possible contraindication and should require a consultant before proceeding with surgery. The average patient experiences a period of tremendous tensions, hopes and fears which continue throughout the preoperative, operative and postoperative periods. Failure is hard to take for the patient and also for the surgeon, and failure after apparent immediate postoperative success seems to be an even greater blow.

In general, mobilization successes on fenestration failures have been rarely reported. This may be due to failure to reproduce the columella effect.

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400 Locust Avenue
Charlottesville, Virginia

Medicine's Fourth Estate

Every active physician recognizes the constantly growing importance of his county, state and national medical societies—the three great "estates" of organized medicine in America.

In the past few decades, medical practice has become ever more complex. Doctors today must deal not only with more than a score of fellow medical specialists, but with several score of "paramedical" technicians, many of whom are finding it difficult to adjust themselves to a "table of organization" in which the Doctor of Medicine must, by training and responsibility, be the captain of the team.

Then, too, in the areas of hospital-physician relations, of public health, of medical care prepayment, and of social security, organized medicine is required to think in new terms and to act with decision, if it is to retain the leadership which the people expect of their physicians. The demands of our time call for medical statesmanship of the highest order.

And now, medicine has added a "fourth estate". The World Medical Association, which, though it was founded only a little more than ten years ago, has already earned for itself world-wide recognition as "the international voice of organized medicine".

The American Medical Association is one of the 53 national medical associations which comprise the membership of The World Medical Association. Within the United States, some 5,500 leading American physicians have formed a supporting committee, known as the United States Committee of The World Medical Association. President of the U. S. Committee is Dr. Austin Smith, Editor of the Journal A.M.A., and its Secretary-Treasurer is Dr. Louis H. Bauer, who has also served as Secretary General of The World Medical Association since its founding in 1947.

The purposes of the U. S. Committee are those of W.M.A. itself: to work for the highest standards of medical care in all parts of the world; to defend and preserve the freedoms that are essential to good medical practice; to provide a forum for the solution of problems common to physicians the world over; and to promote world peace.

You have an opportunity to play your part in this vital cause by becoming a member of the U. S. Committee of U.M.A. The A.M.A. House of Delegates has urged that every member of A.M.A. join the U. S. Committee. Annual dues are $10.00, and the Committee's headquarters are at 10 Columbus Circle, New York 19, New York.

IV. Results Expected from Mobilization of the Stapes

G. DOUGLAS HAYDEN, M.D.
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SINCE ROSEN'S ORIGINAL REPORT in 1952 of accidental mobilization of the stapes footplate while testing for stapes ankylosis in otosclerosis, he has written repeatedly on the subject along with many others. Rosen's purposeful mobilization of the stapes, as reported in 1953, met with considerable initial skepticism which is gradually being dissipated. Our changing attitude towards mobilization is evidenced by our preoperative discussion of surgery with patients having otosclerosis. Two years ago I discouraged patients who expressed interest in stapes mobilization. Now the present discussion recommends a mobilization as a preliminary procedure to fenestration in most cases. In the preoperative discussion one should still emphasize that stapes mobilization is a relatively new procedure, with little known, as yet, concerning the ultimate duration of the hearing improvement.

At the present time, there are no absolute criteria for prediction of results from case selections as there are for fenestration. The residual conductive loss following fenestration that averages 25 decibels permits a reasonably reliable prediction of results from fenestrations. Theoretically, a fully successful stapes mobilization should not leave a residue of unrestored conductive loss, the cochlear function being the ceiling to the hearing results. Actually, contrary to the impression conveyed in some published articles, the ceiling is only occasionally attained.

In general, surgical success in mobilization may be expected in all cases that have risen to the 30 decibel level or above in the main speech frequencies. The highest number of good results are in the "A" suitability group, and, less, of course, in the "C" group.

The results from attempted mobilization of the stapes vary, but improve after one has become thoroughly familiar with the procedure. Most otologists doing the mobilization operation will report a higher percentage of successful results in their most recent series of cases indicating a steadily and continual improvement in the operative technique.

At this time, Dr. House advises his patients, who are suitable candidates for mobilizations that they have 6 chances out of 10 for a successful mobilization but his statistics are above that for his last 100 cases.

In a series of 1400 cases, Dr. House has had six who had total loss of hearing after mobilization. Two of these occurred immediately as the result of trauma and the other four were delayed, apparently, on the basis of hydrops or vascular accidents.

Dr. Shambaugh, Jr., and Dr. Derlachi's series of cases show a very interesting comparison of their initial and most recent results. The improvement was secondary to increased familiarity with the otosclerotic stapes footplate, improved instruments and technique. Complications in a group of 440 operations showed 16 or 3.5% with a further loss exceeding 10 decibels for the speech frequencies. Some of these are accounted for by fracture of the crura, but others are the result of cochlear damage due probably to hemorrhage into the labyrinth.

Dr. Rosen stated at the International Congress in Washington in May, 1957, that 36% of all cases performed at neck reached a level of 30 decibels or better. 36% of all the cases in which mobilization was performed at the footplate reached a level of 30 decibels or better and 44% of all the cases in which a fenestration of the oval window was made reached a level of 30 decibels or better.

As for complications, he stated other than a rare case of acute otitis media, he has not encountered any complications, there not being one instance of total loss of hearing. In a small percentage he has a loss of 10 decibels.

There are several other otologists who have reported large series of cases with their results, but it is not necessary to review all these results. The successful cases average around 60% in their latest series.

Re-ankylosis may be partial or complete and occurs in a significant number of patients. As our period of observation increases, we see more and more evidence of both early and late re-ankylosis. It is quite likely that time will reveal the necessity for revision in re-ankylosis in a large number of

cases, the exact percentage being open to further study.

In conclusion the results of stapes mobilization are encouraging, and the surgery is quite free of operative and postoperative dangers, making the procedure a justifiable first choice in the surgical treatment of otosclerosis.

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Tranquilizers Surgical Patient Care

Four tranquilizing drugs have been found to be helpful in better patient management during surgery. A clinical study by a team of New York doctors indicates that the drugs have a marked effect in relieving apprehension and stress before an operation. This results in a reduction in the amounts of preanesthetic narcotic and induction barbiturates required during and after surgery. Writing in the March 22 Journal of the American Medical Association the doctors term the use of tranquilizers a "major change in preoperative regimen."

Medication before surgery is used to reduce psychic and metabolic activity in patients. This develops a feeling of less over-all depression, allowing a smoother, safer anesthesia with a lower incidence of postoperative complications.

Existing narcotics and barbiturates which have been used in this treatment achieved desirable psychic and metabolic effects but also produced undesirable side-effects such as nausea, vomiting, dizziness, and respiratory depression.

The four compounds observed during the three year study were chlorpromazine, mepazine, promethazine, and diphenhydramine. According to the doctors, these drugs "specifically reduce psychic tension by means of a selective action on the central nervous system areas controlling emotional states."

In addition to obtaining the proper psychic results the doctors observed that the tranquilizers "reduce the incidence of postoperative nausea and vomiting to a great extent. This action is most prominent when chlorpromazine is used."

The doctors—Erwin Lear, Irving M. Pallin, Albert E. Chiron, Lucien Rousseau, and Osamu Aochi, Brooklyn, N.Y.—stated that since the compounds used in the study "potentiate the actions of agents used in anesthesia" the amount of anesthetic administered during surgery can be reduced.

This is also true of the postoperative period. Utilizing the tranquilizers and reducing the amounts of narcotics produces a respiratory pattern similar to that of normal sleep. Because of this, patients tend to doze longer in the recovery room which delays the need for reaction narcotics.

The doctors feel that present tranquilizers "do not represent the ultimate in premedication." Because of their specific action on that section of the central nervous system concerned with stress and emotional response and of possible shock-sparing properties, "they are worthy of more intensive study."

V. Summary and Comments Upon Surgical Treatment of Deafness

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AS MODERATOR of this symposium on defective hearing due to otosclerosis and its surgical treatment, my duties have been made easy, in view of the capable otologists discussing the subject.

While we, here, are considering primarily the surgical procedures of mobilization of the stapes and fenestration, some mention should be made of *other* surgical means utilized in the correction of conductive deafness. These are: removal of lymphoid tissue in the nasopharynx, correction of congenital or acquired atresias of the auditory canal, surgical attack upon infection of the middle ear and mastoid cavity, followed by efforts with grafts of skin or mucous membrane to re-establish the conductive mechanism of the ear (tympanoplasty), and by attempts to restore the integrity of a perforated ear drum (myringoplasty).

While endeavors in the treatment of conductive (impedance, obstructive) deafness have met with real success, nothing is available as yet for those individuals suffering with nerve (receptive, perceptive) deafness except hearing aids and lip reading. Nothing of practical value whatsoever may be offered to those having deafness of central origin.

Dr. Thrift has briefly recounted the history of the present surgical procedures for the treatment of otosclerosis. Surgical efforts to improve hearing date back to the seventeenth and eighteenth centuries. Our recent successes are due to the courage and acumen of such modern otologists as Lempert and Rosen, plus scientists and engineers responsible for the antibacterial medications, the development of the electronics of the hearing aids, testing machines, and instruments for magnification and improved illumination. Investigation of the fundamental histology and pathology of deafness, particularly otosclerosis, is being aggressively promulgated by the various study groups throughout the world.

Dr. Bell, in his discussion of the histopathology of otosclerosis, has pointed out that the basic lesion is new bone formation of and in the vicinity of the stapes and oval window. This same process may occur elsewhere in the middle and inner ear. The pathologic bone can be well visualized macroscopically under adequate degrees of magnification. Certain observers have classified the otosclerotic process as white, pink, and red, depending upon the degree of vascularity and, thus, activity present. The red process is the most active, and surgical procedures in these cases meet with less success, due to the continued development and reformation of more abnormal bone, in contradistinction to the types which are more stable, pathologically, represented by the white limit of the scale of activity. The new bone may fix the ossicles and occlude the oval and round windows, thus interfering with the sound conductive mechanism of the ear.

Dr. Moon was asked to give us the indications and contraindications for surgical attack upon the otosclerotic type of conductive deafness only. Time does not permit us nor was this presentation intended to elucidate upon surgery for active suppuration, fibrous and membranous otitic disease, or congenital anomalies. He has stated in effect that anyone who is suffering with conduction or mixed deafness, and in whom the neural mechanism of the ear is functioning to a good or to a moderately good degree, is a potential candidate for the mobilization procedure, and may have hopes of obtaining acceptable improvement in hearing acuity. In fact, we may eventually suggest that anyone with conduction deafness, having an intact ear drum and no suppurative ear disease, should have a "look in" the middle ear cavity (tympanotomy), as the operation is a relatively simple one and can be accomplished with so little discomfort and risk to the patient. As one would anticipate, some patients are better candidates for a successful result than others. The outcome of the fenestration procedure may be better predicted than that of the mobilization operation. The latter can be surprisingly unpredictable at times. A young otosclerotic is a better candidate (there is question as to the presence of otosclerosis in children—congenital anomalies, yes) than an older person, as far as gain in hearing is concerned. It is obvious that a patient with no neural deafness component has a better chance for obtaining good hearing than one with a mixed type of deafness.

The choice between the fenestration procedure and mobilization of the stapes presents interesting and debatable problems at times. Generally speaking, in candidates with identical preoperative conditions, theoretically, the one having a successful mobilization procedure will obtain better hearing than the one having a successful fenestration operation; for in the latter, there is a deliberate technical interruption of the continuity of the ossicles plus a limitation in motion of the drum membrane, thus a sacrifice of perhaps 20 to 25 decibels of hearing. The advantages of the mobilization operation over the fenestration are numerous. In the case of mobilization of the stapes, the patient spends much less time in the hospital (1 to 3 days) and in the operating room, with thus a significant saving economically, less postoperative discomfort and care, and a better chance for a secondary good result in the event of failure at the time of the initial procedure (questioned by some observers). There are hardly any advantages of the fenestration procedure over the newer one. Though very definitely an equivocal opinion, there is a possibility that, all things being equal, there is less chance of the fenestration closing, thus reverting to the preoperative status of hearing disability, than there is a likelihood of refixation of the stapes. The very nature of the pathologic process would suggest that this is true, but certainly more time is needed to substantiate this viewpoint, and to date it has not been proven to be true.

It has been suggested that stapes mobilization be considered as a preliminary exploratory operation (tympanotomy), to be followed immediately or later by the fenestration procedure if necessary. What harm is done in trying mobilization routinely, prior to fenestration? None, apparently, if too much effort is not made upon the footplate and if the fenestration is carried out immediately. Some believe that too much trauma to the oval window area may jeopardize the cochlear response in the high frequency level; and again, that an auditory canal skin flap, secondarily formed at a later date, results in more bleeding, thus increasing the chances for a labyrinthine accident to a greater degree than the primarily-formed one. The validity of this reasoning is debatable.

Though not actually included in this symposium, something should be said about the technique.

The fenestration procedure requires more time and equipment. A modified type of mastoidectomy is necessary under a general type of anesthesia. Whether the result is successful or a failure, the mastoid and ear cavities are left in a more anatomically-disorganized condition than in the case of the other operation. The morbidity is always greater. The stapes mobilization procedure is performed under local anesthesia, and is followed by comparatively little postoperative discomfort and inconvenience. Less equipment is necessary. If the result is a failure, the ear, as a rule, is left in essentially the same anatomical condition as prior to operation. (Ear drum intact and in normal position, patient may swim, etc.)

The overall results of the stapedial and fenestration procedures have been accumulated and presented by Dr. Hayden. It will be noted that the outcome in all classes of patients, as far as the category of eligibility is concerned, is good in each of the two types of operation. It is impossible now to judge one against the other. If the percentage of success is the same or even slightly better in the case of the fenestration operation, the consensus of opinion of the otologists performing these procedures is that the stapes mobilization should be tried first; and if this results in failure, then the ear may be fenestrated, either as a primary or secondary procedure.

The members of the panel have been requested to say something about tinnitus, which is so disturbing to some of the patients with otosclerosis. For reasons which are completely unknown, a fair percentage of these patients who have been operated upon cease to complain of tinnitus following operation. In others, the symptom persists, regardless of success as far as hearing acuity is concerned.

In summary, a discussion of the surgical treatment of otosclerosis has been ably presented by a panel of otologists who have been performing the stapes mobilization and fenestration procedures. They are convinced by their results that a tremendous advancement has been made in the alleviation of some types of conductive deafness.

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Treatment of Primary Tuberculosis in Children

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IT IS RECOGNIZED that tuberculosis in children under the age of 3 years is serious.[1] It is also well known that those with uncomplicated primary tuberculosis are usually asymptomatic and even those with progressive primary tuberculous disease often have minimal symptoms.[2] Diagnosis in this group is attained, therefore, by means of the routine tuberculin test, performed sometime during the first year of life and annually thereafter. Of course, the test is always indicated when there is known contact with tuberculosis.

Uncomplicated primary tuberculosis may be divided into three main groups: (1) positive reaction in the Mantoux test, with no physical or roentgenographic evidence of tuberculous disease, (2) roentgenographic evidence of regional gland enlargement and (3) roentgenographic evidence of regional gland involvement (usually enlargement) and a primary parenchymal focus.

The primary focus occurs in the lung parenchyma in over 90 per cent of the cases. When, therefore, there is a positive tuberculin reaction with no physical or roentgenographic evidence of disease, it must be assumed that there is a lesion in the lung parenchyma, too small to be visible on roentgenogram, and involvement of the regional lymph nodes (without demonstrable enlargement). This is the most common form of primary tuberculosis.

Next in frequency is that demonstrating involvement of the regional nodes, usually mediastinal, without roentgenographic evidence of a primary parenchymal focus, although one obviously must exist.

Finally, the least frequent group is composed of those with both a demonstrable primary parenchymal focus and regional gland involvement.

A further group is made up of those who exhibit reaction in the Mantoux test with no roentgenographic evidence of disease but with a tuberculous lesion demonstrable on physical examination, *e.g.*, hypertrophy of one or more superficial cervical lymph nodes.

From the Department of Pediatrics and the Child Chest Clinic, Medical College of Virginia, Richmond.

Presented at the Annual Meeting of The Medical Society of Virginia, Washington, D. C., October 27-30, 1957.

Treatment of uncomplicated primary tuberculosis is not yet standardized but a suggested outline is presented here (Table 1). Careful search for and

Table 1

1. Removal of Adult Tuberculosis Contact
2. High Protein Diet
3. Vitamin Supplement
4. Periodic Follow-up
5. Isoniazid, 10 mg/kg. body weight
   (Maximum daily dose 400 mg)

Treatment of Uncomplicated Primary Tuberculosis

removal of the adult tuberculosis contact remain extremely important. Roentgenographic examination of all adults is indicated, and this includes not only parents, grandparents, and other relatives, but also household servants, such as the maid of all work, who is present in the household for one or two days each week, caring for children and housework, while the mother manages to leave for a few hours recreation. The contact must be found and removed.

The infected child must have a high protein diet and the usual vitamin supplements for one of that age.

Follow-up care is extremely important and the child should be seen by a physician at monthly intervals for the first 3 months, bi-monthly intervals for the next 3 visits, again after 3 months, two more visits at 6 month intervals and annually thereafter. Serial chest roentgenograms, fluoroscopy, history and physical examinations are all utilized.

There has been considerable discussion as to whether or not children with uncomplicated primary tuberculosis should receive isoniazid therapy. Such treatment would of course necessarily be directed toward the prevention of complications. Almost three years ago, the United States Public Health Service instituted a study designed to answer the question as to whether or not specific therapy should be utilized in uncomplicated primary tuberculosis. The study began with nineteen cooperating clinics throughout this country, and one in Puerto Rico, and the number of participating groups has now grown to thirty-three, including one in Mexico.

Figures from the study presented earlier this month before the Chest Section of the American Academy of Pediatrics would appear to substantiate

the wisdom of isoniazid therapy as mentioned above.

The Tuberculosis Committee of the American Academy of Pediatrics[3] advises that all children with active primary tuberculosis be given the benefit of isoniazid therapy. However, those who show a positive reaction in the Mantoux test with no evidence of tuberculosis must still be individualized since the danger of complications in this group is not nearly so great.

So-called "progressive primary" tuberculous disease indicates worsening of the patient. While radiographic evidence of increased disease is in itself not an indication that the patient is worsening, it may be helpful.

There are three types of tuberculous pneumonia. One of these may occur at the site of the primary parenchymal focus. The second, which is hematogenous in origin, occurs near, or shortly after, the close of the so-called incubation period and is evidenced on roentgenogram by nodular densities in the lung parenchyma. The most serious form of pneumonia occurs as the result of rupture of a caseous node into a bronchus. Symptoms present in those with the first two types of pneumonia may be relatively inconsequential, but the child affected with pneumonia resulting from rupture of a caseous node into a bronchus is extremely ill.

No discussion of lung densities is complete without some mention of atelectasis. In primary tuberculous disease this may occur in either of two ways: (1) the lesion may be extrabronchial or (2) it may be endobronchial. In the first condition, an edematous node is so placed that it impinges upon the bronchus, causing occlusion of the lumen with resultant collapse of that area of the lung distal to it. In the second instance, a caseous node has actually eaten its way through the wall of the bronchus and filled the lumen with caseous, or granulomatous, material.

In any such case, bronchoscopy is indicated. Nothing can be accomplished by this procedure if the lesion is extrabronchial but if an endobronchial lesion exists, the caseous or granulomatous material may be at least partially evacuated. It must be stated, however, that the treatment of endobronchial tuberculous disease has been extremely disappointing.

No effort will be made here to go into the various types of pulmonary and extrapulmonary tuberculosis which may occur. Suffice it to say, all patients with "progressive primary" tuberculosis should have bedrest in addition to the treatment outlined for uncomplicated primary tuberculosis. All must have the benefit of specific therapy. It is suggested that this consist of isoniazid, 10 mg. per kg. body weight, per day, and para-aminosalicylic acid, 200 mg. per kg. body weight, per day. Therapy should be continued for a minimum of twelve months. If the patient appears to worsen in spite of this treatment, streptomycin, 40 to 80 mg. per kg. body weight, should be added. (Table 2). If miliary tuberculosis or tuberculous meningitis occurs, all three of the above mentioned drugs should be employed.

TABLE 2

1. Isoniazid, 10 mg/kg. body weight
   (Maximum daily dose 400 mg)
2. Para-aminosalicylic Acid, 200 mg/kg. body weight
   (Maximum daily dose 12 grams)
3. Streptomycin, 40-80 mg/kg. body weight
   (Maximum daily dose (gram),
   Dosage of Antimicrobial Agents

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The Clinical Use of Dextrotest

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FOR MANY YEARS there has been a need for a simple blood sugar test that could be quickly and economically carried out in the physician's office, at the bedside, or in the hospital emergency room. Several tests have been suggested in the past but they have had disadvantages that have prevented their general use. The recent introduction of Dextrotest* has filled this need.[1]

In the performance of Dextrotest, water is added to the 2 ml. mark on a specially calibrated test tube. (See Figure 1.) A tablet containing sulfosalicylic acid and sodium bicarbonate is added and allowed to dissolve. One ml. of venous blood is added and the tube is vigorously shaken. The proteins form a brownish precipitate which is removed by paper filtration into a small flared-mouth test tube. After one ml. of the clear filtrate is collected a tablet containing copper sulfate, sodium hydroxide, sodium bicarbonate, and citric acid is dropped into the solution. Heat is generated causing the solution to boil. After the boiling has ceased the tube is shaken briskly and the color compared with a scale thirty seconds later. A blue color indicates a blood sugar of 100 mg. per 100 ml. A green color indicates a blood sugar of 150 mg. per 100 ml. A brown color indicates a blood sugar 200 mg. per 100 ml. An orange color that appears during boiling indicates a blood sugar over 300 mg. per 100 ml. The technician experienced with Dextrotest can interpolate between these levels. More accurate determinations in the higher range can be obtained by repeating the test with a diluted filtrate.

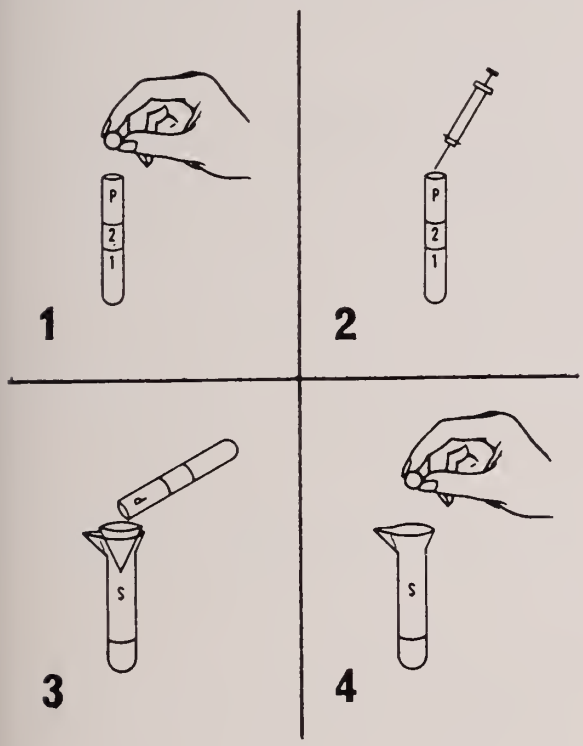


Figure 1—Steps in the performance of Dextrotest:
1. Tablet "P" is added to 2 ml. of water.
2. One ml. of blood is added and the tube is shaken.
3. The precipitated proteins are removed by paper filtration.
4. Tablet "S" is added and the color noted 30 seconds after boiling has ceased.

TABLE 1
GLUCOSE TOLERANCE TESTS WITH USE OF DEXTROTEST IN EIGHTEEN PATIENTS

Glucose Tolerance, Mg./100 Ml.				
Fasting	1 Hr.	2 Hr.	3 Hr.	Diagnosis*
125	225	300	---	Diabetes
150	250	150	---	Diabetes
100	200	150	125	Diabetes†
100	200	125	---	Potential diabetes
100	200	100	---	Potential diabetes
100	150	150	100	Potential diabetes
100	150	125	125	Potential diabetes
100	150	150	125	Potential diabetes
100	150	150	---	Potential diabetes
125	150	125	---	No diabetes†
125	150	125	---	No diabetes†
100	150	100	100	No diabetes
100	150	100	100	No diabetes
100	100	100	---	No diabetes
100	100	100	---	No diabetes
100	150	100	100	No diabetes
100	125	100	---	No diabetes
100	125	100	100	No diabetes

* Diagnosis based on results of Folin-Wu blood sugar tests.

† On basis of Dextrotest alone these 3 patients would have been incorrectly classed as potential diabetics.

Duplicate blood sugars were done in over 1000 specimens from private diabetic patients and in 250 specimens from patients in the diabetic clinics of the District of Columbia General Hospital and the

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Presented at annual meeting of The Medical Society of Virginia, Washington, D. C., October 27-30, 1957.

* Dextrotest: Registered trademark Ames Company, Inc., Elkhart, Indiana.

Georgetown University Hospital. As can be seen in Figure 2, wide variations were sometimes obtained between the results of Dextrotest and the Folin-Wu test.[2] The widest variations were obtained in the early stages when we had no experience with Dextrotest or when we tried to use it under the harried conditions of a busy diabetic clinic. Best results are when each test is carried out individually and without interruption. Constant vigilance is needed to avoid a sloppy and inaccurate technique in using a test as simple as this one. With increased experience in using Dextrotest an accuracy of plus or minus 25% can be obtained.

In the routine management of patients with diabetes mellitus, it is desirable that a blood sugar test be done at the time of each office visit. If the standard blood sugar tests are used the patient usually has to make one visit to the laboratory and a second visit to the doctor. With Dextrotest, it is possible to determine the blood sugar on each patient and to have the result available within five minutes. In the past two years it has been our practice to do both a Dextrotest and a Folin-Wu blood sugar on each diabetic patient at the time of his return visit. The results of the Dextrotest are immediately available and the subsequent treatment is planned on the basis of this. The patient is telephoned later in the day if there is any significant variation between Dextrotest and the Folin-Wu test. In only one out of every one hundred patients is the variation great enough that the treatment must be changed. Dextrotest is a useful addition to the urine sugar test in following diabetic patients when facilities for more accurate blood sugar are not available.

Many patients with mild diabetes have an elevated blood sugar but no sugar in the urine.[3] These patients can be detected if routine postprandial blood sugar tests are performed. In the past two years we have done a Dextrotest blood sugar on every patient who has had a complete blood count in the office. As can be seen from Figure 3, most of these patients had blood sugars around 100 mg. per 100 ml, but some were in the neighborhood of 125 and 150 mg. per 100 ml. The higher blood sugars were usually obtained in patients who had eaten within two hours before the blood sugar was drawn. Further tests were done on those patients with an abnormal elevation of the blood sugar. Three out of the first twenty such patients tested were found to have previously unsuspected diabetes.

Dextrotest was used to rapidly confirm the diagnosis of diabetes in nine patients who had typical diabetic symptoms and glycosuria. Thus, it was possible to start their treatment at the time of the first visit.

A glucose tolerance test is often done to establish the diagnosis of diabetes. This is an expensive and time consuming procedure that is not necessary when

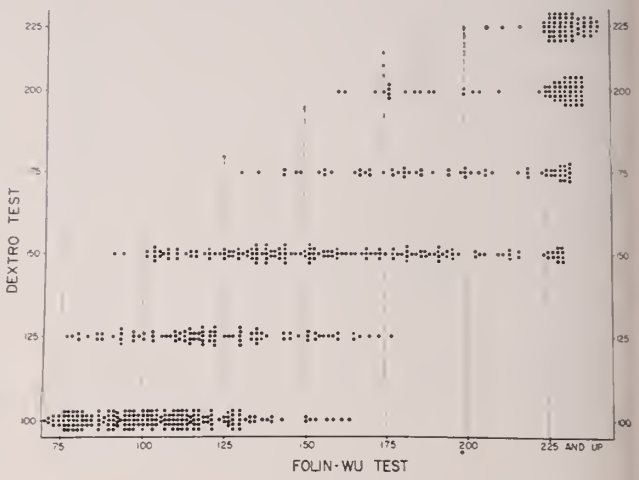


Fig. 2—Scattergram comparing results of duplicate blood sugar tests using Dextrotest and the Folin-Wu method in 729 patients.

there is a definite elevation of the fasting or of the past-prandial blood sugar. In eighteen glucose tolerance tests we used both Dextrotest and the Folin-

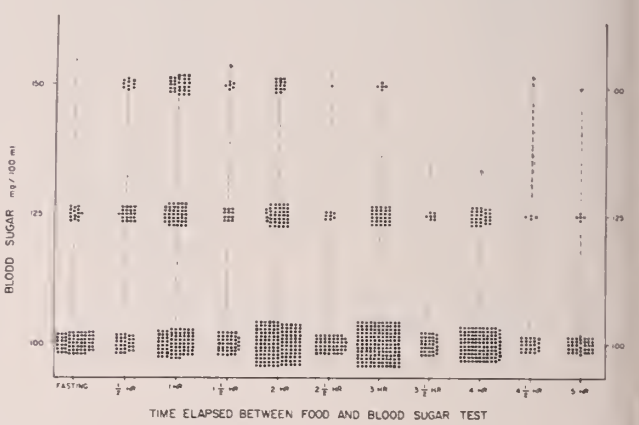


Fig. 3—Graph showing blood sugar levels obtained in 600 patients who had blood drawn for routine blood cell counts. The stars in the top line of the one-hour, two-hour, and three-hour columns indicate new diabetics.

Wu determinations. In general there was a close correlation between the two methods but the more accurate Folin-Wu method is needed to diagnose the border line patient.[4]

In the differential diagnosis of coma due to hypoglycemia and of coma due to diabetic acidosis, a rapid blood sugar test is very helpful. Theoretically, the physician should be able to make the differential diagnosis on the basis of history and the physical

signs and to confirm the diagnosis by testing the urine. However, mistakes do occur. We have seen patients in hypoglycemia given insulin and those in diabetic acidosis given glucose. If Dextrotest had been used routinely in the hospital emergency rooms, the proper treatment could have been instituted immediately.

In the treatment of diabetic acidosis it is desirable to have blood sugar tests every two hours and to know the results of those tests shortly after the blood is drawn. In many hospitals it is difficult to get blood sugar tests at night and on weekends. Emergency blood sugar tests during the day often disrupt the routine laboratory work. Consequently, most patients in acidosis are given too few blood sugar tests. Recently, we have treated five patients in diabetic acidosis using Dextrotest as the only guide to the blood sugar level, the serum acetone test[5] as the only guide to the degree of acidosis, and the electrocardiogram as the only guide to the level of serum potassium. Insulin was injected into the tubing of the infusion as soon as the results of bi-hourly blood sugar and serum acetone tests were known. Thus it was possible to vary the size of each dose of insulin depending upon the response to the previous dose. The size of the initial dose was varied with the blood sugar, the serum acetone and the general conditions of the patient. The initial intravenous fluid given the patient consisted of 1000 to 3000 ml. of lactated Ringer's solution given over a period of two to four hours. As soon as the blood sugar had fallen below 250 mg. per 100 ml. or the urine sugar had changed from four plus to three plus the lactated Ringer's solution was stopped and 1000 to 3000 ml. of 5% or 10% glucose in water was started at a much slower rate. Forty meq. of buffered potassium phosphate was added to each liter of the glucose solution. The disappearance of acetone from the serum after six to twelve hours of vigorous treatment indicated that the acidosis had been successfully corrected. Regulation of the diabetes was then carried out in the usual manner.

Figures 2 and 3 are reprinted from J.A.M.A. 164: 762-764, 1957, by permission of Dr. Austin Smith.

SUMMARY

A rapid and economical blood sugar test has been described. Dextrotest can be used in the detection, diagnosis, and regulation of diabetes mellitus. It is especially helpful in emergency situations such as hypoglycemia or diabetic acidosis.

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Primary Glaucoma

Associated with Thrombosis of the Central Retinal Veins

EDWIN W. BURTON, M.D.
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THE CONCEPT OF GLAUCOMA is ever changing. The primary and secondary glaucomas, a few decades ago, were worlds apart in their then accepted meaning. Now the difference between the two has narrowed. Not many years ago, glaucoma following thrombosis of the central veins of the retina was thought to be a purely secondary type, and little thought, after enucleation of the offending eye, was ever given to the fellow eye. I should not like to minimize the anatomical importance of the intimate relationship between the central artery and vein and their branches at their crossings by virtue of their common adventitious sheaths. It is at these points, when thickening and sclerosis of the vessels is present, that a thrombosis is apt to occur. Undoubtedly, in many of these cases, the glaucoma which ensues is purely secondary in nature. It is also true that here and there have been reports calling our attention to the fact that the glaucoma encountered in some of these cases is, in fact, primary, and that the often high pressure resulting from a blockage of the central vein really represents a glaucoma superimposed on a pre-glaucomatous eye.

Glaucoma, following complete occlusion of the central retinal vein, occurs in some 10 to 20% of the cases. The average interval before the onset of the glaucoma is about three months. Now let us examine more critically some of these cases of thrombotic glaucoma. Duke-Elder[1] has stated "at the time of the occurrence of the thrombosis, when the central vein is involved, the intra-ocular tension is usually low, even by as much as 20 to 30% lower than in the unaffected eye, a phenomenon probably associated with the diminution of the blood flow. Subsequently, however, it tends to rise, particularly in those cases where an initial fall is absent." He further states: "it is to be remembered, of course—a fact which is often forgotten—that thrombosis frequently occurs in pre-glaucomatous eyes; the vascular accident may merely precipitate a pre-destined attack, and, indeed, the glaucoma may be a factor in determining the glaucomatous obstruction."

Redmond Smith[2] feels that the growth of new blood vessels on the iris (rubeosis) always precedes a true thrombotic glaucoma by virtue of blockage of the corneoscleral trabeculae. Since pre-existing glaucoma predisposes to occlusion of the central vein, he believes that primary glaucoma may be present first and is followed by occlusion of the central vein which is followed by a thrombotic glaucoma. In eleven of his cases of glaucoma with central vein occlusion, six had increased intra-ocular tension before rubeosis of the iris or proliferative changes in the angle developed. All six patients had glaucoma in the fellow eye also. This observation may be an important point in determining whether or not glaucoma was present before the thrombosis occurred.

Leydhecker, Weeckers and Grant[3] and others have also shown by tonographic studies that many patients with venous thrombosis have simple glaucoma in the other eye.

I should like to briefly report two cases of thrombotic glaucoma superimposed on a pre-existing primary glaucoma.

CASE I. C. R. M., white male, age 57 years. This patient was first seen on February 3, 1956, about six weeks following a thrombosis of the central veins of the left eye. At this time the corrected vision in the right eye was 20/16, and in the left reduced to hand movements. Examination of the fundus of the right eye revealed moderate arteriolar sclerosis and spasm. In the left eye the fundus exhibited a typical picture of thrombosis of the central retinal vein, with fairly marked sclerosis and spasm of the arterioles and beginning degeneration of the macula. Pulsation of the retinal arteries was present. The tension at the time was 30 mm. Hg. in the right eye and 45 mm. Hg. in the left. Subsequently, the left eye became hard and painful. Bulbous keratitis developed and rubeosis iridis, which had not been present previously, was now well advanced. An alcohol injection gave only temporary relief from the pain. Enucleation of the left eye was performed on

Presented at Thirty-eighth Annual Meeting of the Virginia Society of Ophthalmology and Otolaryngology, Roanoke, December 6-7, 1957.

June 26, 1956. In the meantime, the tension of the right eye has remained elevated in spite of the use of miotics and Diamox, ranging from 25-36 mm. Hg. On Gonioscopic examination of the right eye, the angle was found to be open. Water provocative tests produced a rise in pressure within 30 minutes of 11 mm. Hg. The vision in the right eye has remained normal and the fields are essentially normal. Since the rubeosis iridis on the left eye occurred subsequently to the marked initial rise of tension, and since glaucoma was present in the fellow eye, it is felt that this case represents a pre-existing chronic glaucoma of each eye with thrombotic glaucoma of the left eye superimposed.

Case II. J. C. H., white female, age 70 years. This patient was first seen on June 26, 1956. On the day before, the vision in the right eye had failed suddenly. Right eye vision was reduced to hand movements, and left eye vision was 20/15, corrected. Examination of the right eye revealed a typical picture of thrombosis of the central vein. There was moderate sclerosis of the retinal arterioles. The left eye was normal except for moderate vascular sclerosis. Tension was R.E. 20.4 and L.E. 22.2 mm. Hg. About one month later the tension had risen to 31.8 in the right eye and 36.9 mm. Hg. in the left eye. A trephine operation performed on the right eye gave relief from pain although the tension has remained elevated. At the present time, rubeosis iridis is fully developed and the filtration angle is occluded by vascularized peripheral anterior synecheae. Although she has been taking Diamox and using miotics freely, the tension in the left eye has ranged from 26-37 mm. Hg. Water provocative tests had no effect on the pressure of the right eye, and in the left eye the rise was only 6.1 mm. Hg. It is thought that this case also represents a pre-existing glaucoma followed by thrombosis in the right eye.

In conclusion I should like to re-emphasize that since pre-existing primary glaucoma may predispose to thrombosis of the central vein of the retina, it should behoove all of us to keep this possibility in mind and to observe the fellow eye with the utmost care until the presence or absence of glaucoma can be definitely determined.

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Patients Getting a Better Bargain

"Doctors' fees are lower in relation to living costs than they were twenty years ago." So writes Dr. Arthur G. King in the April 28 issue of Medical Economics. And he proves the point with these interesting examples drawn from U.S. Department of Labor data:

"Back in 1936, an electrician had to work 2½ hours in order to earn the money to pay for a G.P.'s daytime house call. . . . In 1956 it took him only 1½ hours' work" to pay for the same service.

"When the plumber had his appendix taken out in 1936, the surgeon's fee set him back 73½ hours' pay. . . . In 1956 it cost him only 44 hours' pay.

"In 1936, the delivery of a baby by his family doctor cost the electrician 32½ hours of work. . . . In 1956 the average electrician had to work only 27 hours to pay the fee for the same service. . ."

Thus patients are getting a better bargain, the *Medical Economics* article points out. As for doctors, they're worse off in some ways—since their fees have risen less than the cost of living. Dr. King cites these examples:

"A pair of shoes for his wife cost the average G.P. 1.28 house calls in 1936. They cost him 2.28 house calls in 1956. . . .

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"A pair of shoes for his wife cost the average G.P. 1.28 house calls in 1936. They cost him 2.28 house calls in 1956. . .

"In 1936, a surgeon could have bought a stenographer's full-time services for a year with the fees from 12.36 appendectomies. But he had to do 19.44 appendectomies in 1956 to pay for the same amount of strenographic help."

Study of a Virus Epidemic in Rural Public Schools

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THE PURPOSE of this note is to describe an epidemic among elementary school children and the modification of this epidemic by the intradermal inoculation of virus vaccine. Dosage was 0.1 c.c. of Asian "A" (200 CCA units per c.c.) and 0.1 c.c. of the standard polyvalent influenza virus vaccine. Volunteers for the inoculated group consisted of 305 children; control group consisted of 115. Figure 1 shows the total absenteeism during the epidemic period. Figure 2 compares percentage-wise, the inoculated with the control group. Inoculation was done on October 1, 1957.

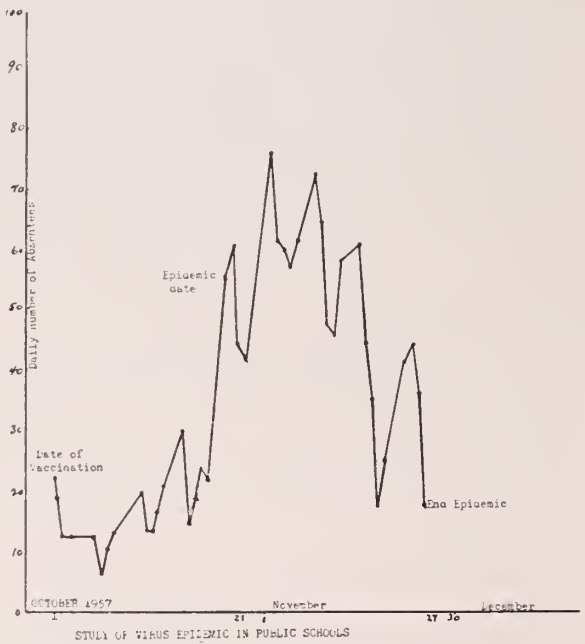


Figure 1.

Four clinical pictures were manifested during the epidemic: (1) gastrointestinal symptoms lasting one to two days; (2) Slight sore throat with tenderness at the angle of the mandible, and a granular palpebral conjunctivitis; (3) A severe syndrome, beginning with severe frontal headache, gradually developing fever, and mild tracheal cough. This subsided after three or four days to the picture of a "head cold", afebrile but with a dry cough; (4)

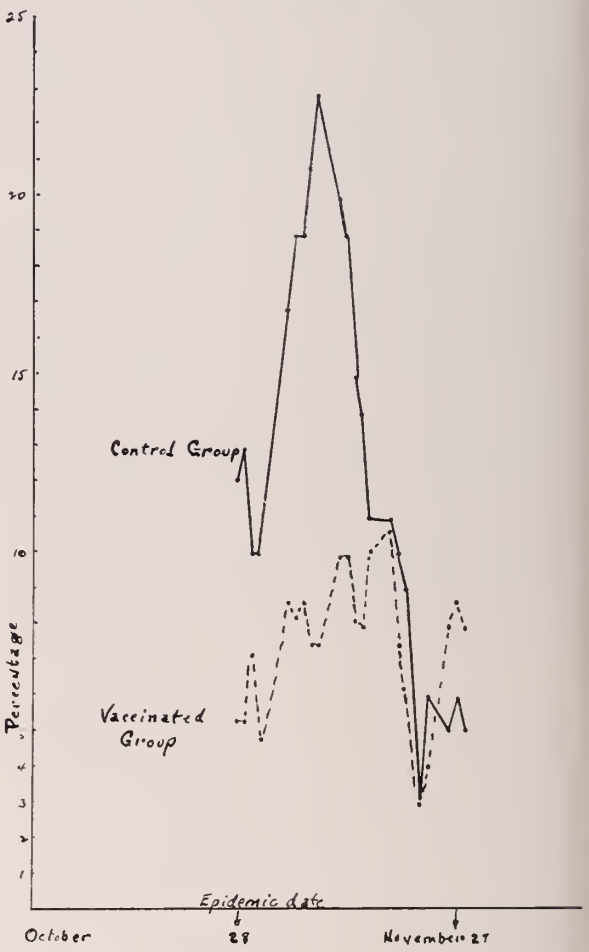


Figure 2.

Also relatively severe was a gradually developing tracheobronchial cough, with high fever, temporal and orbital headaches, malaise and generalized aching in the neck and back muscles.

The third and fourth syndromes were commonly followed by a persistent, dry, tracheal cough, and a low grade "viral" peritonsilar erythema. Occasionally, there was cryptitis with a cheesy exudate. Pneumonia was not encountered.

Our statistics have excluded the two mild clinical pictures and are based on the third and fourth syndromes lasting three or more days.

In 289 of the inoculated groups there were 107 cases of the severe illnesses. The vaccine therefore was 62% effective. In the group of 103 controls, only 39 were so protected, or 38%.

In conclusion, intradermal inoculation of school children has produced significant modification of this particular viral epidemic. Several additional clinical pictures are noted, probably each with its own viral agent.

———

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Reading Disorders

Premature births and complications during pregnancy may be factors in causing reading disorders among children. This theory was advanced by Drs. Ali A. Kawi of New York and Benjamin Pasamanick of Columbus, Ohio, in March 22 Journal of the American Medical Association.

Following a controlled study of 205 boys, ranging in age from 10 to 14 years, with known reading disorders, the doctors observed, "Children with reading disorders had a significantly larger proportion of premature births and abnormalities of the prenatal and paranatal periods than other control subjects."

Brain damage during pregnancy has been a factor in fetal deaths and it is known that such brain damage plays an important part in cerebral palsy, epilepsy, mental deficiency, and behavior disorders in childhood. Since the brain plays a major role in our ability to read it was natural to assume that such damage to the brain during pregnancy could contribute to reading disorders in children.

This study, involving only boys, was conducted in Baltimore and included 205 children with reading disorders and a similar number, in the same age category, with normal reading behavior. In addition to basic identification, the examiners obtained birth certificates, clinical information, and complete hospital birth records of each child studied.

The doctors found that "a total of 104 complications occurred among the group with reading disorders, as contrasted with 50 in the control group." "Of the children with reading disorders, 16.6 per cent had been exposed to two or more maternal complications, as compared to 1.5 per cent among the controls." Maternal complications appearing to be highly associated with reading disorders are "preeclampsia, hypertensive disease, and bleeding during pregnancy." The three tend to produce an oxygen deficiency, the doctors said.

Since premature infants are more susceptible to oxygen deficiencies, it is interesting to note that 11.5 per cent of those children with reading disorders had been born prematurely. This compares with only 4.6 per cent of premature births in the control group. These premature percentages include only surviving infants.

As a result of their study the doctors concluded that the age of the mothers, number of previous pregnancies, length of labor, and the type of delivery are not contributing factors in reading disorders.

In the future, "efforts must be directed toward the eradication of maternal and fetal abnormalities, since these not only influence infant loss but also appear to have an effect on the surviving infant." This can be done, they added, by preventive measures and improved treatment during pregnancy.

Correspondence . . . .

Diagnosis of Poisoning

To The Editor:

Referring to the editorial note on Diagnosis of Poisoning-Sulfanilamide Compounds — which appeared in the Virginia Medical Monthly 85:149 (March) 1958. I wish to state that the test described by you in this note was originated by me in a paper published by me in the Virginia Medical Monthly 69:334 (June) 1942 and entitled "Lignin Test For Sulfonamides." The test proposed by me in this paper was confirmed repeatedly by E. Bogen and also by Robert Hubata in his paper entitled "A Simple Test for the Detection of Sulfonamide Compounds in Urine" which appeared in War Medicine 5:56 (January) 1944. I was very glad to learn that my test is now generally accepted and is serving a useful purpose.

Leo I. Hallay, M.D.

Fort Blackmore, Virginia
March 8, 1958

Poison Information Center

To The Editor:

I noticed with interest the letter regarding the Richmond Poison Information Center written by Mrs. Cary W. Davis, (February 1958). I think that the Monacan Junior Woman's Club is to be complimented for their excellent work with reference to the poison center. Both the State Chapter of the American Academy of Pediatrics and the Virginia Pediatric Society have been keenly aware of the problem of poisoning particularly in children and have active committees at work throughout the State. The State Health Department in cooperation with the City Health Department and local Medical Society has now established Poison Information Centers in Norfolk and Roanoke. The Public Health Service has established a National Clearing House for Poison Information Centers which sends out monthly bulletins to the three Poison Control Centers in the State and assists in compilation of data. An active educational program aimed at the public as well as the physician is already under way in a number of communities throughout the State. It is hoped that every physician will avail himself of the facilities of the centers in the State and will, as Mrs. Davis mentioned, emphasize to his patients the importance of prevention of poisoning.

H. Wm. Fink, M.D.
State Chairman of the Accident Prevention Committee, American Academy of Pediatrics

Norfolk, Virginia
April 1, 1958

Epidemic Diarrhea Caused by Virus

Two outbreaks of epidemic diarrhea among hospitalized infants were found to have been caused by a virus, a group of New York researchers have reported. This is "the first instance in which a virus isolatable by laboratory methods has been shown to be a cause of diarrhea." (March 29 Journal of the American Medical Association)

Bacteria or parasites are known to be a cause of some diarrheal diseases, but in about 65 per cent of cases, no bacterial or parasitic cause can be found. It has generally been assumed that a number of viruses may be responsible for these illnesses, but a definite viral agent had never been isolated.

In the New York outbreaks, ECHO virus type 18 was found to be associated with every case. The two outbreaks occurred in July 1956 at New York Hospital. Twelve of 21 infants in the premature nursery became ill. A detailed survey failed to show any noninfectious or bacterial cause for the outbreak. Four days after the end of the first outbreak, a second occurred in a sick infant ward in the same hospital. Five babies became ill. The infection was apparently carried from one nursery to the other by a nurse from whom the virus had been isolated.

The authors listed several points that give support to the conclusion that the virus called ECHO 18 caused the outbreaks: ECHO 18 was isolated from every infant who became ill, but not from those remaining well. The virus was found among infants in the premature nursery only during the course of the outbreak; it was not present before or after the epidemic ran its course. The second outbreak occurred after exposure to a nurse known to be infected, again showing a definite association between the presence of the virus and the appearance of diarrhea.

Of some interest was the course of the illness in premature infants. Considering their relatively poor response to bacterial infection, these infants "withstood their illness surprisingly well." The disease was mild and they recovered soon.

The authors are Dr. Heinz F. Eichenwald, Alexander Ababio, B.A., and Drs. Albert M. Arky and Alan P. Hartman of the department of pediatrics, the New York Hospital-Cornell Medical Center.

Mental Health . . . .

JAMES B. FUNKHOUSER, M.D.

EEG Studies in Mongolism

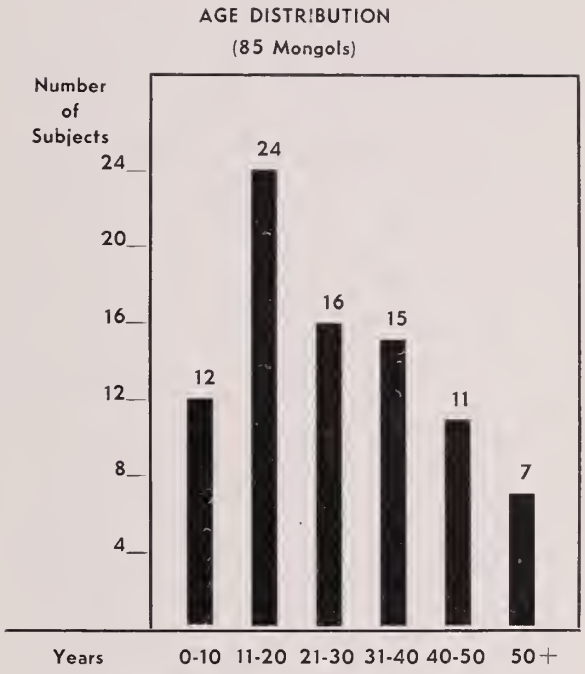
Except for a number of papers in psychological journals by George Kreezer comparing the alpha index and amplitude with intelligence, and one paper by Siv Gunnarson on a similar topic, there is very little that has been written specifically about the electroencepalograms of mongols. Except to quote Kreezer, standard texts such as Diagnostic Electroencephalography by Strauss and Clinical Electroencephalograph by Cohn do not mention mongols. Schwab's Electroencephalography in Clinical Practice says only that the "EEG's of mongols are usually normal".

However, in Gibbs' First Atlas, it is stated that "mongoloid imbeciles without a history of seizures and without evidence of severe brain damage show more abnormalities than the undifferentiated feebleminded. In such patients the EEG shows large numbers of scattered slow waves but also many fast waves 18-20 per second which vary greatly in amplitude."

As a small part of a larger study of cardiovascular and other anomalies by Benedict Nagler, M.D., and R. H. G. Butcher, M.D., at the Lynchburg Training School and Hospital, Colony, electroencephalograms were made on 86 cases randomly selected out of the total of 230 mongols in residence.

Because of a general inability to cooperate (more than 69 were classified as idiots or imbeciles, 3 morons, 14 unknown mental age) the records were characterized by artifact and were difficult to interpret with confidence. Forty-six were male, 40 female. The age range was from four months to 52 years—average age 27+. The age of one patient was unknown.

In this group of 86 electroencephalograms four were paroxysmal in character. One of the paroxysmal records appeared in one of the three morons who did not have any history of seizures. The other three paroxysmal records were obtained in patients who either had known or questionable seizures. Records were grouped into (1) normal and borderline normal, (2) mild to moderate diffuse slow, (3) amplitude asymmetry and mild focal slowing, (4) severe paroxysmal slow and/or spikes and (5) abnormally fast records. Only one record in the 86 was considered abnormally fast. This is curious when we consider Gibbs' findings and the age of these patients. Eighteen of these cases were 40 years of age and over.



These groupings were then compared with Gibbs' original study (EEG Classification of Epileptic and Control Subjects—Archives of Neurology and Psychiatry 50: 2, August 1943) whose epileptic and control groups matched our age groups remarkably well.

The percentages of the five groups and the comparisons are shown as follows:

	No. Cases	Approx. % Mongols	% Gibbs' Normal Controls
(1) Normal (including borderline)	56	65.7	84.2
(2) Mild to moderate diffuse slow	18	20.7	8.3
(3) Amplitude asymmetry and mild focal slow	7	8.1	0.0
(4) Severe or paroxysmal slow and/or spikes	4	4.4	.9
(5) Mild to severe fast	1	1.1	6.6

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Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

Statistically the level of confidence for the comparison of (1) normal and borderline and (2) abnormal slow records are significant at the .5% and 1% level respectively but the other groups are too small in number and percentage for meaningful calculation of significant differences.

On the basis of this preliminary study the mongols at Lynchburg, when compared to Gibbs Normal Controls in approximately the same age group, show

(1) less normal records
(2) more than twice as many diffuse slow records
(3) many more focal findings and amplitude asymmetry
(4) nearly five times as many epileptic patterns
(5) but one-fifth the amount of fast records

Thus our small study did not confirm the Gibbs' finding of frequent abnormal fast activity in mongols. Our number of cases is possibly too small for accurate comparison. It is presumed that the second edition of Gibbs' Atlas will amplify this matter (and indeed the whole subject) considerably. Meanwhile, further studies at Lynchburg should supply us with more information on what appears to be a somewhat neglected subject.

Danger from Hepatitis

A recent four-year study has given additional proof that storage of pooled blood plasma at room temperature eliminates the danger of hepatitis being transmitted by the plasma. Hepatitis, a liver disease, is caused by a virus which may be transmitted through transfusion of whole blood or plasma.

Reported in the March 15 Journal of the American Medical Association, the study was conducted at the University of Cincinnati College of Medicine and Cincinnati General Hospital between January 1953 and January 1957. The survey included 282 patients who were given plasma taken from 4,892 donors. This plasma was pooled and stored at room temperature for six months. None of the recipients developed hepatitis.

Dr. Paul I. Hoxworth and Walter E. Haesler, Jr., B.S., said several methods for circumventing the problem of hepatitis virus transmission by plasma have been tried since World War II, when the problem first became apparent. All methods were unsuccessful in eliminating virus activity in the plasma.

Among the methods tried were: ultraviolet irradiation of the plasma; addition of chemicals to destroy virus activity, and elimination of pooling, in which plasma from several persons is put together without regard to blood type.

Storing of pooled plasma at room temperature was suggested in 1951. The Cincinnati study indicates that the storage method is "a practicable and effective solution" to the plasma-hepatitis problem and plasma can now be given to patients without concern over the transmission of serum hepatitis.

This inability to detect hepatitis in the study group "is in sharp contrast" to all previous experiences with untreated and irradiated pooled plasma, in which the infection rate has ranged from one per cent in small pools of six or eight units to 22 per cent in larger pools.

In addition to causing the virus to lose its activity, the storage method has permitted a return to pooling and has removed the limitation imposed by the use of group-specific plasma, a requirement that had eliminated one of the most important advantages of plasma—use in the treatment of shock while waiting for whole blood to be matched.

Under the new method, it is possible for many blood banks to salvage plasma from outdated blood which is now being wasted. The survey indicates that plasma, when stored, will remain suitable and effective for an indefinite period of time.

The storage method is simple and adaptable to existing blood bank facilities. It requires only the ordinary safeguards necessary to insure other requirements for suitability of plasma.

Pre-Paid Medical Care . . . .

Edited by
RICHARD J. ACKART, M.D.

A Revised Blue Shield Contract

With the approval of the State Corporation Commission the Richmond Blue Shield Plan is now issuing a revised Standard Contract, the provisions of which will become effective June 1, 1958. This new Contract and the new Blue Shield Fee Schedule pertaining to it represent considerable thought and effort not only on the part of those physicians who serve as members of the Plan's Board of Directors, but also on the part of the Blue Shield Advisory Committees appointed by the various specialty societies of the State. The methods used to determine how best to revise the Standard Contract—as well as the results—truly and obviously reflect the fact that here in Virginia Blue Shield is indeed "The Doctors' Plan".

Nonetheless, a report of the accomplishments of the fourteen different groups of physicians, which independently met to overhaul the Plan's Standard Contract arrangements, would be incomplete were it not to mention another noteworthy fact—that each group oriented its discussions and recommendations according to an expressed concern about the interests of individual subscriber-patients and about the welfare of the entire subscribing-public.

The decisions about changing the Standard Contract and its Fee Schedule, accordingly, were based on doctors' interpretations of the propriety and equity of this Contract's provisions and financial arrangements when considered in relationship to the ability to pay of families whose total annual incomes are less than $4,000. It is for such families that the Standard Contract is designed; it is only to such families that Participating Physicians render included services for no extra charge. Persons whose incomes exceed the stipulated limits are not contractually eligible for full-service benefits, and in their situations the Blue Shield Standard Fees are comparable to indemnity payments toward their doctors' charges.

In this regard, one of the new provisions of the Standard Contract, one which was sponsored by the Medical Service Committee of The Medical Society of Virginia as well as by numerous individual physicians, will modify the full-service agreement of a Participating Physician to whatever extent his subscriber-patient might have insurance or other coverage for payment for the services rendered.

Another change in Blue Shield arrangements—this one being adopted to help counter-balance the additional cost of certain larger Blue Shield fees—was the elimination as of January 1, 1958, of the quarterly "bonus payments" that had previously been made to Participating Physicians. The most important specific changes to be found in the revised Blue Shield Standard Contract are summarized by type of service, as follows:

Surgical Services. The Standard Contract's provisions for surgical services and fees were reviewed by the Council of the Virginia Surgical Society; by the Blue Shield Advisory Committees of the Virginia Society of Ophthalmology and Otolaryngology, the Virginia Orthopedic Society, and the Virginia Urological Society; and by those surgeons connected with the State's Medical Schools who restrict their practice to neurological surgery. Upon the recommendation of these groups, the Plan is increasing the amounts of many of the specific fees payable under the Standard Contract and is increasing the maximum fee for any one procedure from $150 to $200. Some services which previously were excluded are now provided for by the revised Contract: most minor surgical procedures, including circumcisions of newborn infants, and certain diagnostic endoscopic examinations. As in the case of all other surgical services, these new services will be "covered" no matter where rendered; hospitalization is not a prerequisite to payment of any Blue Shield surgical fee.

Anesthesiology Services. Upon the request of the Virginia Society of Anesthesiologists provision for physician-conducted anesthesias will become an integral part of the revised Standard Contract; the special, optional endorsement will be eliminated. Also, the new arrangement will include Blue Shield payments for anesthesiology services which are rendered in conjunction with vaginal deliveries, a pro-

vision that had been omitted from the Endorsement. The anesthesiology fees will be approximately 20% of the pertinent surgical fees, as follows:

Blue Shield Anesthesiology Surgical Fee			Fee
$ 10	to	$ 60	$10
61	to	75	15
76	to	125	20
126	to	150	30
151	to	200	40

Medical Services. The new Standard Contract arrangements pertaining to in-hospital medical care culminated from an interchange of the ideas and opinions proffered by representatives of the Virginia Section of the American College of Physicians, the Virginia Academy of General Practice, the Virginia Pediatric Society, the Virginia Neuropsychiatric Association, the Richmond Society of Internal Medicine, and the Plan's Board of Directors. The new arrangements will provide for an increase in Blue Shield medical fees of approximately 33% according to the following revised schedule:

First day	:	$10.00
Second day	:	5.00
Third day	:	5.00
Fourth day	:	4.00
Fifth day	:	4.00
Sixth day	:	4.00
Seventh day	:	4.00
Subsequent days	:	3.00

Also, the special Blue Shield medical fees available for payment in complicated and critical cases which make unusual demands upon physicians' time will be increased to $20 for the first day and $10 for the second day.

In addition to increased medical fee payments, the revised Standard Contract will provide for an increased period during which a subscriber-patient will be eligible for medical services. Up to 60 days of medical care per hospital confinement, as defined in the Contract, will be provided for, and ninety days therafter benefits will be renewed to provide for another 60 days of care. It was deemed necessary to retain the previous arrangements pertaining to the $10.00 Blue Shield consultation fee. Also, to keep the "risk" in the realm of insurability, a subscriber-patient in whose behalf surgical fee payments are made will, as at present, be eligible for the additional benefit of Blue Shield-covered medical services only in the event there is an unusual non-surgical complication of a critical nature, such as cardiac decompensation. However, the revised Blue Shield arrangements will make available specific fees for certain procedures which previously were considered as "regular" medical care (e.g.: sternal punctures, arthrocenteses, thoracenteses), and the appropriate special fee—if larger—will be payable in lieu of the pertinent per-diem medical fee.

Pediatric Services. In addition to participating in the revision of the Plan's provisions for medical services, representatives of the Virginia Pediatric Society recommended two additional changes which will apear in the revised Standard Contract. In-hospital medical care of sick and premature infants will be provided for from the date of birth and for up to sixty days, and a special Blue Shield payment of up to $10 will be available for usual nursery care of newborn infants whenever such care is rendered by a physician other than the physician to whom the Blue Shield delivery fee is to be paid.

Obstetrical Services. Because the Blue Shield fee payable in the usual maternity case pertains only to the delivery and to the in-hospital post-partum care of a subscriber-patient, it does not represent nor influence the "case fee" frequently charged by physicians who do obstetrical work. Accordingly, the members of the Virginia Obstetrical and Gynecological Society who assisted in the revision of the Standard Contract suggested but one change. The ten-months waiting period, which is applicable in the case of new subscribers and presently is applicable to care of pre-partum complications of pregnancy as well as to delivery services, will be contractually waived whenever complications require hospitalization during the pre-partum period—provided, of course, the delivery would normally occur after completion of the waiting period.

Radiology Services. The Virginia Radiological Society recommended full-payment (no "co-insurance" as at present) of a revised Blue Shield fee schedule for diagnostic x-ray examinations. The proposed arrangements were adopted by the Plan, as was the recommended inclusion, within certain limits, of x-ray therapy for treatment of malignant tumors and professional use of radium, radon, and radioactive isotopes. The rental or purchase costs of radioactive materials, up to $100 per year, will be covered, too, by the provisions of the revised Standard Contract.

Pathology Services. Adopting the recommendations of the Virginia Society of Pathology, the Plan will make Blue Shield fees available for payment to pathologists who are in private practice for tissue

examinations (surgical pathology), both fixed and frozen sections.

It is, of course, a truism that whatever health care expense a subscriber-patient has not pre-paid for through the Plan, he must post-pay for out of his pocket, at a time when his illness might make the out-of-pocket payment more onerous. Accordingly, by pre-paying to Blue Shield the additional $1,925,000 that the Plan must have to provide for the benefits of the revised Standard Contract, the Plan's subscribers will reduce the frequency with which unexpected post-payments will confront them, as well as reduce the amount of such post-payments. Of this additional income to the Plan, however, one-quarter of a million dollars will be used to increase the Blue Shield fees payable under the Standard Contract, making the Plan of more value to physicians, too. In all, each year Blue Shield subscribers will turn over more than six million dollars to the Plan, entrusting that amount to the physicians who make the Plan possible. Such evidence of trust should in some way be acknowledged by every physician—perhaps the best way is through being a Participating Physician of the Plan.

Glaucoma a Threat to the Aging

An increasing life span is contributing to an upswing in diseases common to our aging population. Among the most feared of these is glaucoma, a common eye disease characterized by tension within one or both eyes, and with a high rate of incidence in persons past 40.

Writing in the March 15 Journal of the American Medical Association, three Memphis doctors estimate "one million persons over 40 in the United States have unrecognized glaucoma." While tragic, this is a problem that could be eliminated, since early detection and treatment "can preserve vision for the lifetime of the individual."

Glaucoma, in its early stages, gives no evidence of pain and there is no apparent loss of vision. For these reasons personal detection is almost impossible and the doctors recommend that an eye examination "be made a part of every general physical examination in persons over 40 years of age."

The simplest means for testing for glaucoma is the tonometer—an instrument for measuring tension in the eyes. Physicians can be taught to use the isstrument after a brief period of instruction. Its use "requires less time and no greater aptitude than obtaining the blood pressure."

Tonometry was used as the basis for a six-month glaucoma detection program conducted by Drs. Margaret E. Horsley, Philip M. Lewis, and Henry Packer at the John Gaston Hospital in Memphis. All patients over 40 years of age admitted to the outpatient clinics of the hospital for any reason were tested by routine tonometry. The doctors felt that this program "would permit an early diagnosis of glaucoma to be made in a significant number of patients before they are aware of any visual loss."

More than 1,200 patients were examined in this manner. Four per cent were found to have unrecognized glaucoma. The diagnosis by tonometry was confirmed by employing comprehensive tests commonly used in glaucoma detection.

Results of this program indicate that routine determination of eye tension by tonometry "would be a major step toward avoiding much of the blindness resulting from glaucoma."

Public Health....

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Regulation of Radiation Exposure by Legislative Means

A resolution was passed by the House of Delegates of The Medical Society of Virginia on October 29, 1957, which supports plans and policies of the Virginia State Department of Health to regulate and safeguard against radiation exposure. The resolution offers assistance of the Society to the State Department of Health in securing adequate legislation to effect this purpose. It further recommends that a committee from the Medical Society be appointed to study and advise concerning the hazards of radiation exposure.

Until about 1950 the National Committee on Radiation Protection discouraged the incorporation of its recommendations into legislative or other similar control acts. It was felt that better results could be obtained through education and voluntary compliance. The committee has now adopted the policy that it will not recommend or oppose the incorporation of its findings into state codes. To the end that the regulations may be made as sound and workable as possible, the committee will provide all assistance within its capabilities. A further object is to assist in developing a maximum degree of technical and operational uniformity between radiation regulations of the several states where need for control may be felt.

The problem is one of possible injury to human beings due to peaceful use of ionizing radiation. Radiation is injurious to living things. The kinds and degrees of injury are dependent on the sensitivity of the organisms exposed and the kind and amount of radiation they receive. Hazards of radiation to health are fairly accurately known. Recent developments of sources of radiation, including radioisotopes, and multiplication in their uses, both industrial and medical, make associated health hazards more important. As health hazards from disease are brought under better control, other hazards to health, not yet well controlled, rise in relative importance and warrant greater efforts to abate them. This indicates that some degree of statutory control of radiation hazards is becoming necessary.

Radiation is silent, unseen, and unfelt. Its presence can be detected only by means of instruments. Some of its damaging effects on the human system may not develop until many years after exposure. The lay mind has, therefore, developed a fear that is in some cases extreme. Radiation hazards cannot be treated like some of the common hazards. The potential hazard must be recognized and control measures must be instituted for immediate needs and for future expansion.

All medical uses of radiation should be subject to the same general control as industrial or research uses. The fact that radiologists and physicians know a great deal about radiation hazards should not exclude them from control. On the other hand, great care should be exercised to avoid any possible interference with medical practice, either by intent or by implication.

Expansion of the use of atomic energy in industry is of deep significance to the economy and defense of nations all over the world. The hazards of the industry are those which are related primarily to specific activity of the materials used and of the products and by-products developed. Concern is particularly directed to the storage, release, and disposition of radioactive wastes, which may be in the form of solids, liquids, or gases. The period of radioactivity of certain nuclides is long. The effects of exposure to low levels of radiation may be cumulative. Consideration must be given not only to the on-site dangers to workers but to the resulting off-site environmental hazards that involve both people and natural resources.

The possible solution to the problem should attempt to bring about effective protection from the radiation without restricting its use in valid applications.

The least restrictive would be to follow the present broad policies augmented by a widespread program of education. Under the present policy the Atomic Energy Commission screens all applicants and applications for radioisotopes and the various medical and industrial bodies carry on educational and advisory programs for their members. The expansion of this program through more intensive education in the

widening areas of use of radiation is a possible solution.

A second possible solution would require the registration of all sources of radiation. If the registrant or the proposed use seemed questionable, inspection could be made and advice could be given as to proper protective procedures. This arrangement would place little restriction on the valid use of ionizing radiation. The user would know that his practices were open to inspection and would be likely to watch them carefully.

A third possible solution would be the most restrictive. It would call for inspection and licensing of all radioactive sources. It would be costly and difficult to administer. It does not lend itself to cooperative effort on the part of the control agency and the user. It is not recommended.

Statutes and codes or regulations should be enforceable within the willingness of the vast majority of the affected persons to submit to control, and with the funds that are available through legislative appropriation. Every unenforceable provision weakens the effect of the other provisions, which might in themselves be enforceable. The statute should be as simple as possible, leaving details to codes or regulations not requiring statutory amendment. Such flexibility permits changes to be made as a result of:

1. Continuing growth of scientific knowledge.
2. Technical improvements in the art of radiation hygiene.
3. Increased public acceptance of control through better education and emotional reaction to threats of atomic and radiological warfare, etc.
4. Changing relative importance of other hazards —epidemic and sporadic diseases, industrial accidents, traffic accidents, etc.
5. Changing political philosophy and complexion that alter the monies available for enforcements.

The several fields of radiation hygiene should be covered in one statute. Any effective law is likely to work to someone's disadvantage. The disadvantages should be foreseen, weighed against expected benefits, and ameliorated, if possible, before being incorporated in the statute. The administration of the statute should be placed in one department rather than divided among several.

The shortage of trained personnel will be a problem for many years. This should militate against starting an over-ambitious regulation program. Unskillful inspectors can be dangerous through ignorance, and costly to the user through overzealousness. Eventually the agency should provide inservice training for its own personnel. Certain key people might be sent for higher-level education to recognized radiation-training centers or universities to receive training not available elsewhere.

Ref.: "Regulation of Radiation Exposure by Legislative Means," Recommendations of the National Committee on Radiation Protection. Handbook 61, National Bureau of Standards, issued December 9, 1955.

Monthly Report of Bureau of Communicable Disease Control

	Mar. 1958	Mar. 1957	Jan.-Mar. 1958	Jan.-Mar. 1957
Brucellosis	1	2	2	5
Diphtheria	4	2	9	2
Hepatitis	32	57	88	139
Measles	3652	923	5193	1651
Meningococcal Infections	11	9	29	22
Meningitis (Other)	27	17	63	46
Poliomyelitis	0	4	1	7
Rabies (In Animals)	41	32	123	90
Rocky Mt. Spotted Fever	0	0	0	0
Streptococcal Infections	1159	1204	2445	2298
Tularemia	0	2	18	15
Typhoid Fever	2	5	7	13

Medical Legislation in 1958. Report of Committee on Legislation

The 1958 session of the General Assembly of Virginia was marked by a spirit of conservatism, and little of a novel or spectacular nature was accomplished. The background of racial tension developed a "wait and see" attitude which extended to other fields, with the result that controversial matters usually died in committee. Perhaps it was better so. However, there were a number of questions which required the attention of the Committee on Legislation, and these were considered in one or more of the several meetings held by the Committee during the session.

HOSPITAL-PHYSICIAN RELATIONSHIPS

At the 1956 session several bills of a highly controversial nature dealing with hospital-physician relations generally, and particularly such relationships in State-supported institutions and hospitals, and in private hospitals with respect to certain special services such as radiology, anesthesiology and pathology, were prepared but were withheld pending a study during the next two years by the Virginia Advisory Legislative Council. During the course of this study a Statement of Principles covering many of the differences which had arisen was adopted, and a V.A.L.C. report drafted and approved which recommended that no substantial changes be made in the existing statutes dealing with medical practice. This report went to the Governor and the General Assembly, and was published as Senate Document 11 of the 1958 session. The Legislative Council proposed the following changes in the medical statutes:

(1) Expressly authorize State Medical Colleges to employ physicians for teaching purposes.

(2) Permit State institutions under the State Hospital Board, and State tuberculosis sanatoriums, to employ physicians for professional services to inmates and patients.

(3) Authorize hospitals to employ both licensed and unlicensed practitioners as interns and residents to render the limited and supervised medical care now furnished as a part of their course of instruction.

These changes in the statutes, which simply recognize and remove possible doubt as to the legality of existing practices, were approved by the Council and Legislative Committee of the Society, and were enacted by the General Assembly without opposition. Hospitals and physicians are essential to each other, and the high character of their joint service demands a friendly and harmonious solution of their differences.

REGULATION OF PHYSICAL THERAPY

Pursuant to a joint resolution adopted in 1956, the Virginia Advisory Legislative Council made an interim study and report of the licensing of physical therapists, the report recommending that the practice of physical therapy be regulated under the Medical Examining Board, with the examinations given and graded by an Advisory Committee of five physical therapists appointed by the Governor. Dr. Hagood was a member of the Advisory Council, and Dr. Haddock was one of the study group, both of them being patrons of the bill which was enacted without opposition after certain amendments had been adopted or defeated. The chiropractors attempted to amend the bill to permit them to prescribe physical therapy and direct its use, but after public hearings the proposed amendments were rejected by the General Laws Committees of the two houses. After June 27, 1958, no physical therapist can engage in the practice of his profession except on the prescription or under the direction of a licensed doctor of medicine, homeopathy or osteopathy. The practice is recognized as an adjunct to medicine, and must be used only after a diagnosis indicates its need. The Act carries the grandfather clause usually found in initial regulatory statutes. Its enactment in Virginia would seem to be particularly appropriate because of the work in physical medicine being done at the Medical College of Virginia under grants made by Mr. Bernard Baruch.

LICENSING STATUTES

At the request of the Board of Medical Examiners your Committee approved and its Chairman became patron of a bill making the following changes in the medical statutes:

(1) Raised the minimum passing grade on a single subject to 70%.

(2) Eliminated the Part II examination on homeopathy.

(3) Deleted the provisions with respect to the use of A.M.A. lists of approved medical

schools of graduation of applicants from foreign countries other than Canada. (These lists are not current and have been discontinued by A.M.A.)

(4) Provided for an automatic suspension of the medical license of a physician convicted of a felony or of a crime involving moral turpitude, or adjudicated insane or incompetent by a court of competent jurisdiction. Provisions were inserted for a termination of the suspension under prescribed conditions. Under the present law a formal hearing by the board was required before a license could be revoked or suspended.

The bill carried an emergency clause, was enacted into law without opposition. and became effective March 1958.

NURSING SCHOLARSHIPS AND TRAINING FACILITIES

A new law established five annual scholarships of the value of $1,000.00 each, to be awarded registered professional nurses who agree to pursue post graduate training and upon the completion thereof to engage in the education, preparation and training of student nurses in Virginia for a period of years equal to the number of years of study given under the scholarship award. The program will be administered by a committee made up of two members of the respective faculties of the Medical College of Virginia and The Medical School of the University of Virginia.

The interest of the General Assembly in making additional nursing service available was evidenced by a Senate Bill offered and passed in the closing days of the session, the purpose being to establish an Advisory Council on Nursing Training with directions to make an inventory of existing nurse training facilities, survey the need for construction of additional training facilities, and draw up a plan for the construction of such facilities and the administration thereof in conjunction with public and nonprofit hospitals. Under the plan the State may contribute not to exceed one-third of the cost of an approved project, but no funds will be made available by the State unless and until the Council has satisfactory assurance that the cost of two-thirds of the project has been or will be made available from sources other than State appropriations. An appropriation of $500,000.00 for each year of the biennium was made to the Council to carry out the general purposes of the Act, but the conditions under which the funds may be used will not be known until a State plan has been adopted by the Council. The Act will not become effective until June 27th, and the first $500,000.00 will not be available until the new biennium begins on July 1, 1958.

MATERNITY HOSPITALS

At the last meeting of the House of Delegates of the Society, certain amendments to the maternity hospital law were proposed by the Committee on Maternal Health and approved, and a bill making the changes effective was enacted by the General Assembly. The amendment redefines a "maternity hospital" so as to include only a place or establishment where obstetrical deliveries are done, and clears up a real doubt as to the inclusion of places where pre-natal or post partum services only are furnished. A bill making the desired changes in the law was prepared by counsel for your Committee, but before it was introduced in the House a bill in identical language was presented by Senator Fenwick and piloted by him through both houses. Your Committee is grateful to him for his services.

SECOND INJURY LAW

The members of the Committee on Industrial Health, and a number of other physicians as well, have been interested in obtaining appropriate amendments to the Virginia Workmen's Compensation Laws to provide an adequate second injury statute for the protection of handicapped workers in our State. The principle involved has been endorsed by the House of Delegates at two successive meetings, and your Committee and counsel for the Society gave the matter a great deal of time and study before the General Assembly convened, going so far as to prepare a tentative draft of a bill for further consideration. However, the Committee was informed early in the session that counsel for the Industrial Commission had already prepared a bill which had the approval of the Commission, of industry, and of the insurance carriers, so the matter was deferred until that bill should be presented to the General Assembly. At a later time counsel for the Society, at the request of Dr. Charles L. Savage, obtained copies of this bill from the Industrial Commission and delivered them to the Honorable Felix E. Edmunds of Waynesboro, who had agreed to introduce it in the House. The bill was offered by Mr. Edmunds on February 14, 1958, and referred to the Committee on General Laws. Shortly thereafter counsel for the Society prepared an explanation of

the bill and gave Mr. Edmunds copies thereof for the members of the Committee. Copies of the resolution of the House of Delegates approving the principle of a second injury law were also given Mr. Edmunds by Mr. Howard, and every assistance promised. However, it became evident that the bill as drawn would meet serious opposition in the General Assembly, and that its chance for passage was not good. In fact the Secretary of a large and influential association of employers stated to counsel that his group would oppose any legislation which imposed additional insurance charges on employers. In the light of these developments it seemed best to leave the bill in committee, and attempt to obtain approval of a joint resolution directing the Virginia Advisory Legislative Council to study the problem and make a report with a draft of desirable legislation at the 1960 session of the General Assembly. Such a resolution was prepared and offered in the House on February 24th by Mr. Edmunds and the Chairman of this Committee, and received final approval on the last day of the session. The resolution provides for the completion of the study by August 1, 1959. As soon as the study is assigned to a member of the Advisory Council and the sub-committee making the study is appointed, the Committee on Industrial Health should offer its services and give the study group all available information. The adoption of a satisfactory plan will not be easy, for there are nearly as many different second injury statutes in effect as there are states in the Union.

RADIATION HAZARDS

In each of the meetings of the committee the problem of how to deal with radiation hazards was considered, but there was no unanimity of opinion as to what, if anything, should be done at that time. The State Health Commissioner prepared a bill for consideration, and this was left with counsel and the legislative members for further study. About that time the report of the Virginia Advisory Legislative Council on State regulation of the uses of atomic energy was released (later published as Senate Document No. 15), which report recommended that no legislation in this field be now enacted, but that the study be continued until Federal statutes are in effect defining the powers of the State in this field. Because of this development the bill was not introduced. On February 10 Senate Joint Resolution No. 29 directing the Advisory Council to make a still broader study of atomic energy, air pollution, and the use of x-rays and other forms of radiation was offered, and was adopted by both houses. It seems highly desirable that the Society's Special Committee on Radiation Hazards co-operate with the Council in the study.

The question of the use of x-rays in fitting shoes came before the Committee, and it was thought best to have the advice of the Committee on Radiation Hazards before offering the bill which had been prepared by counsel. Because of delay in obtaining that advice, the Norfolk member of the Committee requested Senators Baldwin and Breeden of Norfolk to offer the bill at the request of the Norfolk Academy and this was done. The bill becomes law on June 27th, after which time it will be unlawful to use any x-ray, fluoroscope, or other equipment, employing roentgen rays in the fitting of shoes. Licensed physicians in the practice of their profession are not affected.

MISCELLANEOUS

There were many other matters having the attention of your Committee, a few of which will be mentioned briefly. A number of changes were made in the laws dealing with the handling and dispensing of drugs and drug products and poisons, but the bill first offered was amended in many particulars, and it is difficult at this time to know just what was included in the final version. In rural districts the Board of Pharmacy has been granting physicians permits to sell medicines, charging an annual fee of five dollars for each such permit. Under the amendment the Board will no longer issue permits but will grant such physicians a certificate to practice pharmacy, making a charge of ten dollars per year for such certificate. A bill was passed authorizing institutions under the control of the State Hospital Board to supply certain discharged patients with drugs or medicines for treatment following their release. A Commission on the Aged was created and its duties and powers prescribed. The fee for birth and death certificates was increased to one dollar. Some changes were made in the welfare statutes, and in those dealing with juvenile delinquents, but these are of general interest and have been reported in the press.

Your Chairman is grateful to the members of the committee for their assistance and counsel, and particularly to his colleagues in the General Assembly for their untiring efforts in the interest of sound medical legislation. The work of Dr. Hagood as chairman of the study group on hospital-physician relationships, and that of Dr. Caudill as chairman

of the sub-committee appointed to draft the committee's final report, laid the foundation for at least a temporary solution of that vexing problem. The next two years will doubtless bring a lot of progress in the uses of atomic energy, and the protection of our people from the accompanying hazards will challenge us both as physicians and as legislators. Without your help we shall not be able to meet that challenge.

W. C. Elliott, M.D., *Chairman.*

James D. Hagood, M.D.
Dean B. Cole, M.D.
W. C. Caudill, M.D.
Benjamin W. Rawles, M.D.
Edward G. Haddock, M.D.
Harry C. Bates, Jr., M.D.
William H. Barney, M.D.
Richard E. Palmer, M.D.
Mallory S. Andrews, M.D.

Reduces Need for Electroshock

A new drug combination has shown promise in the treatment of depression, according to a Boston psychiatrist.

The drug combination made unnecessary the use of electroshock treatment in more than half of the patients to whom it was given in a recent study. Electroshock has been the treatment most frequently employed in depression.

Writing in the March 1 Journal of the American Medical Association, Dr. Leo Alexander of the Boston State Hospital division of psychiatric research reported the "complete and/or social recovery" within an average of eight weeks in 21 (57 per cent) of 35 patients with neurotic or psychotic depressions.

The new combination is meprobamate (Miltown) and benactyzine hydrochloride. (Its trade name is Deprol.)

Dr. Alexander described the recovery rate, even though the study was a small one, as "highly promising," definitely above the spontaneous recovery rate expected during the first year of illness, and only slightly below that obtained with electroshock.

Even among those patients who did not recover while taking the drug, the alleviation of symptoms was marked. The few side effects that occurred were "minimal and easily controlled."

Depression was defined as "a state of sadness with self-reproaches and psychomotor inhibition, with sleep disturbance . . . and disturbance of appetite."

To be effective against depression a drug must reduce excitability without too much depressive action, and at the same time strengthen a person's "ego boundaries" by "reducing psychic pain, fear, and resultant avoidance responses engendered by stress." While no single drug fulfills both requirements, meprobamate fulfills the first and benactyzine hydrochloride the second.

Dr. Alexander's study was carried out in 35 patients who suffered from depression sufficiently severe to warrant consideration of physical treatment methods. All were treated at home for periods of two weeks to six months.

Twenty recovered within one to 25 weeks, the average being eight weeks. Twenty-six of the patients had psychotic depressions of the manic-depressive or involutional type, while nine had neurotic depressions. The recovery rate was identical for the two groups; 15 of the psychotics recovered, while five of the neurotics recovered.

In the 20 patients responding favorably to the drugs, the early effect was a marked reduction of tension and depressive pondering, as well as a striking reduction in hostility toward the self and of suicidal trends. Resumption of the normal sleep pattern was also one of the striking early effects, he said.

Dr. Alexander concluded that further work with this drug combination is "desirable and promising."

Miscellaneous . . . .

Principles of Medical Ethics.

This is the fourth of the series of "Principles of Medical Ethics", the first appearing in the February issue. Each section will be reviewed, accompanied by a detailed explanation from the Judicial Council of the American Medical Association.

SECTION 4

The medical profession should safeguard the public and itself against physicians deficient in moral character or professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession.

TRADITIONAL CONCEPTS INCLUDED WITHIN SECTION 4

The Judicial Council is of the opinion that Section 4 of the Principles of Medical Ethics, 1957, embraces the spirit and intent of several sections of the 1955 edition of the Principles, including Chapter I, Section 11 (Evasion of Legal Restrictions); Chapter III, Section 1 (Upholding the Honor of the Profession); Chapter III, Section 2 (Membership in Medical Societies); Chapter III, Section 3 (Safeguarding the Profession); Chapter III, Section 4 (Exposure of Unethical Conduct); Chapter VI, Section 9 (Disputes Between Physicians). These sections are reproduced below as guides in the interpretation of Section 4.

Chapter I, Section 11 (Evasion of Legal Restrictions) 1955 edition of the Principles of Medical Ethics:

> An ethical physician will observe the laws regulating the practice of medicine and will not assist others to evade such laws.

Chapter III, Section 1 (Upholding the Honor of the Profession) 1955 edition of the Principles of Medical Ethics:

> A physician is expected to uphold the dignity and honor of his vocation.

Chapter III, Section 2 (Membership in Medical Societies) 1955 edition of the Principles of Medical Ethics:

> For the advancement of his profession, a physician should affiliate with medical societies and contribute his time, energy and means so that these societies may represent the ideals of the profession.

Chapter III, Section 3 (Safeguarding the Profession) 1955 edition of the Principles of Medical Ethics:

> Every physician should aid in safeguarding the profession against admission to it of those who are deficient in moral character or education.

Chapter III, Section 4 (Exposure of Unethical Conduct) 1955 edition of the Principles of Medical Ethics:

> A physician should expose, without fear or favor, incompetent or corrupt, dishonest or unethical conduct on the part of members of the profession. Questions of such conduct should be considered, first, before proper medical tribunals in executive sessions or by special or duly appointed committees on ethical relations, provided, such a course is possible and provided, also, that the law is not hampered thereby. If doubt should arise as to the legality of the physician's conduct, the situation under investigation may be placed before officers of the law, and the physician-investigators may take the necessary steps to enlist the interest of the proper authority.

Chapter VI, Section 9 (Disputes between Physicians) 1955 edition of the Principles of Medical Ethics:

> Whenever there arises between physicians a grave difference of opinion, or of interest, which cannot be promptly adjusted, the dispute should be referred for arbitration, preferably to an official body of a component society.

ANNOTATIONS to SECTION 4 OPINIONS AND REPORTS OF THE JUDICIAL COUNCIL

The following are excerpts from Reports and Opinions of the Judicial Council which are applicable in interpreting Section 4.

Entertainment Expenses

The Judicial Council has been asked to express its opinion with respect to the ethical aspects of expenditures made by physicians for the entertain-

ment of other physicians. The Council does not consider such expenditures as *per se* unethical. There are circumstances under which a professional obligation may rest on a physician to entertain other physicians. It is a usual and necessary concomitant of the practice of medicine. It is certainly not an uncommon practice and is recognized by the profession generally as entirely proper and justifiable.

The opinion of the Council was requested on this matter because governmental tax authorities in several jurisdictions have questioned the right of physicians to deduct entertainment expenses for income tax purposes, contending that such expenditures are unethical. The Council is informed that the deductibility of similar expenditures has been permitted where the taxpayer is a lawyer. The Council knows of no reason why a different ruling should apply when the taxpayer is a physician. (*1951 Report*)

SECTION 5

A physician may choose whom he will serve. In an emergency, however, he should render service to the best of his ability. Having undertaken the care of a patient, he may not neglect him; and unless he has been discharged he may discontinue his services only after giving adequate notice. He should not solicit patients.

TRADITIONAL CONCEPTS INCLUDED WITHIN SECTION 5

The Judicial Council is of the opinion that Section 5 of the Principles of Medical Ethics, 1957, embraces the spirit and intent of several sections of the 1955 edition of the Principles, including Chapter I, Section 4 (Advertising); Chapter II, Section 4 (Patient Must Not Be Neglected); Chapter VI, Section 5 (Emergency Cases); Chapter VI, Section 6 (Precedence When Several Physicians Are Summoned); Chapter VI, Section 7 (A Colleague's Patient); Chapter VI, Section 8 (Substitution in Obstetric Work). These sections are reproduced below as guides in the interpretation of Section 5.

Chapter I, Section 4 (Advertisement) 1955 edition of the Principles of Medical Ethics:

> Solicitation of patients, directly or indirectly, by a physician, by groups of physicians or by institutions or organizations is unethical. This principle protects the public from the advertiser and salesman of medical care by establishing an easily discernible and generally recognized distinction between him and the ethical physician. Among unethical practices are included the not always obvious devices of furnishing or inspiring newspaper or magazine comments concerning cases in which the physician or group or institution has been, or is, concerned. Self-laudations defy the traditions and lower the moral standard of the medical profession; they are an infraction of good taste and are disapproved.
>
> The most worthy and effective advertisement possible, even for a young physician, especially among his brother physicians, is the establishment of a well-merited reputation for professional ability and fidelity. This cannot be forced, but must be the outcome of character and conduct. The publication or circulation of simple professional cards is approved in some localities but is disapproved in others. Disregard of local customs and offenses against recognized ideals are unethical.

Chapter II, Section 4 (Patient Must Not Be Neglected) 1955 edition of the Principle of Medical Ethics:

> A physician is free to choose whom he will serve. He should, however, respond to any request for his assistance in an emergency or whenever temperate public opinion expects the service. Once having undertaken a case, the physician should not neglect the patient, nor should he withdraw from the case without giving notice to the patient, his relatives or his responsible friends sufficiently long in advance of his withdrawal to allow them to secure another medical attendant.

Chapter VI, Section 5 (Emergency Cases) 1955 edition of the Principles of Medical Ethics:

> When a physician is called in an emergency because the personal or family physician is not at hand, he should provide only for the patient's immediate need and should withdraw from the case on the arrival of the personal or family physician. However, he should first report to the personal or family physician the condition found and the treatment administered.

Chapter VI, Section 6 (Precedence When Several Physicians are Summoned) 1955 edition of the Principles of Medical Ethics:

> When several physicians have been summoned in a case of sudden illness or of accident, the first to arrive should be considered the physician in charge. However, as soon as is practicable, or on the arrival of the acknowledged personal or family physician, the first physician should withdraw. Should the patient, his family or his responsible friend wish some one other than he

who has been in charge of the case, the patient or his representative should advise the personal or family physician of his desire. When, because of sudden illness or accident, a patient is taken to a hospital without the knowledge of the physician who is known to be the personal or family physician, the patient should be returned to the care of the personal or family physician as soon as is feasible.

Chapter VI, Section 7 (A Colleague's Patient) 1955 edition of the Principles of Medical Ethics:

When a physician is requested by a colleague to care for a patient during the colleague's temporary absence, or when, because of an emergency, a physician is asked to see a patient of a colleague, the physician should treat the patient in the same manner and with the same delicacy that he would wish used in similar circumstances if the patient were his responsibility. The patient should be returned to the care of the attending physician as soon as possible.

Chapter VI, Section 8 (Substitution in Obstetric Work) 1955 edition of the Principles of Medical Ethics:

When a physician attends a woman who is in labor because the one who was engaged to attend her is absent, the physician summoned in the emergency should relinquish the patient to the first engaged, on his arrival. The one in attendance is entitled to compensation for the professional services he may have rendered.

ANNOTATIONS to SECTION 5 OPINIONS AND REPORTS OF THE JUDICIAL COUNCIL

The following are excerpts from Reports and Opinions of the Judicial Council which are applicable in interpreting Section 5.

Advertising by Groups

Many of the questions submitted to the Council involve the subject of advertising. As is well-known, there is a marked tendency of late for physicians to organize themselves into so-called groups under various designations, such as group clinics, diagnostic clinics, group medicine, medical institutes, the (blank) medical academy, and similar names. Unfortunately some of these groups are advertising in a manner that would be considered most reprehensible if done by an individual physician. The Council is unable to see any difference in principle between a group of physicians advertising themselves under whatsoever title they may assume and an individual physician advertising himself. (*1922 Report*)

"Advertising" Determined by Factor in Each Case

There was submitted to the Council an inquiry as to whether a given advertisement of a certain medical institution, which the institution desired to run in the public press, was ethical or unethical, and if not ethical, wherein specifically it was unethical. The answer to this question cannot be based solely on the wording of the advertisement. It is perfectly evident that an advertisement which would be proper under one set of conditions might be highly improper under a different set. (*1922 Report*)

Review of Advertising Practices Obligation of Local Societies

A great many communications have been received with respect to advertisements used by individual physicians, groups, clinics, pay clinics and hospitals owned by individuals or groups. Practically all of the advertising that has been submitted, has been found objectionable. This Council wishes to state, however, that the members of the state associations who use objectionable advertising are responsible to and under the control of the censorial agencies of the societies of which they are members. The Secretary has been directed, therefore, to refer communications of this nature to the secretary of the constituent medical association concerned, with the suggestion that they should be brought to the attention of the board of councilors, or through them to the attention of the board of censors of the component society concerned. (*1923 Report*)

Form Letters on Periodic Health Examinations

At the Dallas session the Reference Committee on Reports of Officers recommended that the Board of Trustees be requested to prepare letters to be used by the members of the component county medical societies for stimulating interest on the part of the public in periodic medical examinations. The Board of Trustees asked the Judicial Council for a ruling as to questions of ethics that might be involved in the use of such letters.

It is the opinion of the Judicial Council that the sending out of any circular letter or any form of

printed or written matter which may be construed as advertising or as soliciting patronage by the individual physician or by any group of physicians is unethical.

At the Washington session a resolution provided that the Board of Trustees be requested to prepare approved forms of letters or literature which may be sent out by county medical societies to the public to promote the value of periodic health examinations. If such letters are to be distributed by component county medical societies, the Judicial Council sees nothing particularly objectionable to the following letter prepared by the Bureau of Health and Public Instruction:

> It is easier, safer, cheaper, more certain, more comfortable and more efficient to keep well than it is to get sick and be cured.
>
> Within less than half a century the average at death has increased from about 43 to 58 years.
>
> This increase in life expectancy has resulted almost wholly from the great decrease in mortality during infancy and childhood, while in middle life the average expectancy has changed but little.
>
> Much improvement might be made and life prolonged, if the diseases of middle life were detected in their early stages.
>
> The surest way to detect these diseases is through the periodic health examination.
>
> Have a health examination at least once a year by your family doctor. (*1928 Report*)

Solicitation of Patients and Requirements of Law

Complaint has come that physicians have permitted their names to be posted in factories and elsewhere in such a manner as to conflict with the Principles of Medical Ethics which prohibits solicitation of patients. Here again the laws of the states obtrude, since some of them specifically provide that an industry or an employer must post the names of physicians whose services are available to employees.

The determination of some questions of ethics must depend on the law; and the individual state medical association, as it holds original jurisdiction in such matters, must consider these questions, deal with them in the light of the law and seek to effect needed corrections. (*1929 Report*)

Commercial Medical Directories

The Judicial Council is of the opinion that most, if not all of the directories, described in the resolutions condemning as unethical the listing of physicians, by specialty, in directories published by commercial concerns, are but subtle ways of avoiding the pronouncement of the Principles of Medical Ethics concerning solicitation of patients, under a guise of buying a directory when the real intent is the purchase of the publication of the buyer's name in the directory for the purpose of obtaining patients. (*1936 Report*)

Insignia for Members of Special Groups

An organization having to do with the certification of physicians requested the opinion of the Judicial Council on the ethical standing of their credential holders should they carry or wear a key indicating their membership in that organization or show on their professional stationery a replica of the key together with initial letters indicating their membership. It was felt that approval of such procedure if given to one group of doctors of medicine could not well be withheld from any other body composed of doctors of medicine desiring to do likewise; that, if such a custom became prevalent, irregular practitioners and cultists would rapidly follow suit; that the display advertising of those least qualified to give good medical care to the public would be most apparent, and that the confusion in the lay mind would lead to much harm to the indiscriminating public. (*1941 Report*)

Solicitation by Individuals or Groups

It might be advisable at this time, when voluntary prepayment health insurance plans are progressing and when some plans are being offered by others, not connected with the medical profession, in which the formation of medical groups is being encouraged, to discuss the ethics involved in this situation. The Council would therefore remind members of the Association that while solicitation of probable insurers or insurees is necessary to the success of medical insurance plans and is permitted, the solicitation of patients either by individuals or by medical groups is absolutely forbidden. (*1946 Report*)

Use of Yellow Pages of Telephone Directory to Indicate Medical Practice and Office Hours

Chapter I, Section 4, 1955 edition of the Principles notes that publication or circulation of simple professional cards is approved in some localities but is disapproved in others and states that disregard of local custom and offenses against recognized ideals are unethical. Chapter III, Section 1 of the 1955 Principles obligates the physicians to uphold the dignity and honor of his profession. It is the opinion of the Judicial Council that the component medical society must, in the final analysis, determine what

practice is in accord with local custom, but that in so doing, it should exercise great caution to insure full compliance with the spirit and intent of the Principles. The practice of medicine should not be commercialized nor treated as a commodity in trade. Respecting the dignity of their calling, physicians should resort only to the most limited use of advertising and then only to the extent necessary to serve the common good and improve the health of mankind. (*JAMA, May 7, 1955*)

Use of Sign Located in the Lobby of Office Building

Chapter I, Section 4 of the 1955 edition of the Principles of Medical Ethics proscribes the solicitation of patients. It has been an accepted principle that the most worthy and effective advertising is the establishment of a well-merited reputation for professional ability and fidelity; and that disregard of local customs and offenses against recognized ideals are unprofessional. It is the opinion of the Judicial Council that local customs vary from community to community, and therefore it is the obligation of the component medical society to determine whether, in a given locality, the use of such a sign would be an affront to the ideals of the community and bring discredit to the profession. It is the further opinion of the Council that both the physician who contemplates the use of such advertising and his component society should fully observe the precept of Chapter III, Section 1 of the 1955 edition of the Principles: "A physician is expected to uphold the dignity and honor of his vocation". (*JAMA, October 15, 1955*)

Listing of Name in a Commercially Sponsored Advertising Directory

The Principles proscribe the solicitation of patients directly or indirectly. The House of Delegates of the Association has expressed disfavor with the practice of permitting one's name to be listed in a commercial advertising directory because it is or may be interpreted to be the indirect solicitation of patients. In 1936, a resolution was introduced in the House of Delegates. It reads as follows: "Whereas, certain commercial interests are publishing medical directories, listing physicians by specialty and otherwise, as available for insurance and compensation work, and other professional services, and whereas, participating by listing in these lay publications merely serves for the profit of the promoters and is furthermore more technically indirect solicitation of patients, be it Resolved that the Arkansas Medical Society condemns these practices as unethical and forbids its members to continue listing their names in such directories and be it further resolved that the Arkansas Medical Society requests the House of Delegates of the American Medical Association to take similar action." The Reference Committee to which this resolution was presented reported that it "is of the opinion that most, if not all, of the directories described in the resolutions, condemning as unethical the listing of physicians by specialty in directories published by commercial concerns, which were introduced by Dr. Brooksher of Arkansas, are but subtle ways of avoiding the pronouncement of the Principles of Medical Ethics concerning solicitation of patients, under a guise of buying a directory when the real intent is the purchase of the publication of the buyer's name in the directory for the purpose of obtaining patients." The Reference Committee report recommending approval of the resolutions was adopted by the House of Delegates.

The Judicial Council quotes this action for emphasis and calls attention to the fact that the action of the House of Delegates is binding on the members of the Association. The Council would further state that a physician who uses or permits the use of his name in a commercial directory that fails to include on like terms and without discrimination the names of all licensed physicians practicing in the area served by the directory has the burden of proving that his action is in keeping with the Principles. (*JAMA, June 9, 1956*)

Retention of Name of Deceased Physician on Office Door, Stationery, in Telephone Directory, etc.

While the Principles of Medical Ethics prohibit solicitation of patients, the Judicial Council is of the opinion that the continued use of the name of a deceased member of a group or partnership by those who continue the medical practice of that group or partnership is not of itself a violation of the Principles, if such practice is not contrary to local custom or the law of the community. The practice becomes unethical if it misleads or deceives the public, if it offends against local custom and ideals, or if it is contrary to law. Whether such practice tends to or does deceive or mislead depends on all the facts of each situation and includes both the intent of the user and the anticipated effect such practice will have in the particular community. Only the component medical society can ascertain these facts and determine from them whether the practice is or is not in violation of the spirit and intent of the Principles. The Council is of the further opinion that better practice dic-

tates, if the name may properly be used, some means to indicate that the former member if deceased; for example, John Doe, M.D., 1880-1954. In passing, the Council expresses the feeling that in some exceptional situations the continued use of the name of the deceased by his surviving associates may well be a fitting tribute to the memory of one who contributed materially to the advancement of medicine. (*JAMA, June 18, 1955*)

Distribution of Reprints of Articles

One normally would not take it upon himself to mail reprints indiscriminately without sufficient reason. What constitutes a sufficient reason is impossible to define categorically. Certainly it would not be ethical for a physician to mail reprints if his intent was to solicit patients directly or indirectly or to attempt to bring undue attention to himself. The practice, therefore, cannot be recommended. This is not to say that the author of a medical article may not honor requests for copies of his article. (*JAMA, March 30, 1957*)

Indication of Medical Society Affiliation on Professional Cards

The physician should limit the use of statements of qualifications and honors on letter and billheads and professional cards to the simple, dignified abbreviation, "M.D.," or the statement "Doctor of Medicine." To do more smacks of self-laudation, borders on solicitation of patients, and tends to reduce the degree and title "Doctor of Medicine" to secondary importance. While it cannot be concluded that it is unethical to use specialty designations in this manner, it can be said that the practice is not in the best of taste or in the best interest of the profession. (*JAMA, March 30, 1957*)

Unethical Advertising

The Principles of Medical Ethics do not proscribe advertising as such; they proscribe the solicitation of patients. Advertising, in its broad sense, means the act of making information, fact, or intention known to the public. Solicitation, as used in the Principles, means the attempt to obtain patients by persuasion or influence. Advertising, as distinguished from solicitation, is not in itself unethical.

The public is entitled to know the names of physicians, the type of their practices, the location of their offices, their office hours, and the like. The doctor may ethically furnish this information through the accepted local mediums of advertising, which are open to all physicians on like condition. Telephone listings, office signs, professional cards, dignified announcements, all are acceptable mediums of making factual information available to the public.

The particular use to be made of any ethical advertising medium and the extent of that use are, however, matters to be determined according to local ideals. What constitutes an excess, what is not in keeping with the ideals of medicine, what transcends advertising and becomes solicitation are questions of fact. The application of this principle is to be made locally. (*JAMA, March 30, 1957*)

Use of Medical Emblem on Automobile

Nothing in the Principles of Medical Ethics proscribes the use of a medical emblem by a physician on his automobile. It may be noted that it has long been the custom of the Association to provide for its member at cost, registered medical automobile insignia. (*JAMA, March 30, 1957*)

Announcements Concerning the Opening or Removal of a Doctor's Office.

On opening an office a physician may properly send announcements to his colleagues, to his intimate personal friends not in the medical profession, and to those persons in allied fields with whom it may reasonably be expected he will associate. Announcements of the opening of an office should not be mailed indiscriminately to all persons in the community, nor should commercial mailing lists be utilized. A brief news item carried in the local press, in itself, is not unethical. Local societies may, however, in the exercise of good judgment determine and fix limitations in this regard.

On removing an office a physician may properly advise of this fact to the same persons and in the same manner as he may announce the opening of an office. In addition, he may, and should, advise his patients of the essential facts concerning this removal. In any case, the physician is well advised to check with the appropriate officer or committee of his local medical society in order to conform his conduct with local practice. (*JAMA, March 30, 1957*)

Form of Announcement Concerning the Opening or Removal of a Doctor's Office

No form has been approved by the American Medical Association. Under the Principles of Medical Ethics and in keeping with the ideals of the profession, it would seem that no objection would be made to a simple statement of fact, without undue embellishment, e.g.:

Dr. John Doe (or John Doe, M.D.) announces the opening (the removal) of his office at (followed by location or locations, in case of removal). Office hours, telephone number, and a statement concerning limitation of practice, if applicable, may be included.

The above suggestion is to be understood as advisory only and is not to be considered an exclusive form that must be used. In all cases the local society can be looked to for an authoritative opinion. (*JAMA, March 30, 1957*)

Use of Physician's Name in Connection with Civic Enterprises

The Judicial Council, at a recent meeting, approved the following comments expressed by Dr. George F. Lull, Secretary of the Association, in answer to a request similar to the above:

"I believe it is an excellent thing for physicians to take part in civic enterprises. I think we have gone the other way and held ourselves aloof so long that we are not considered part of the community in many places. It is my personal opinion that our public relations can be improved by each individual physician's activities, since the people who come in contact with him usually judge all physicians by his standards."

The Judicial Council does not believe that the use of a physician's name in connection with a civic project should, in itself, be considered contrary to the Principles of Medical Ethics. (*JAMA, March 30, 1957*)

Announcement of the Opening of Physician's Office

The Judicial Council has stated that it cannot pass judgment in advance on a situation that may later come before it on appeal; that is, the Council cannot be an attorney for a society or a member thereof and later a judge in the same factual situation. The component medical society has the obligation of determining whether or not the action described constitutes an infringement of ethical principles as set forth in Chapter I, Section 4, of the Principles (1955 edition). Therefore, questions of this type should be presented to the appropriate official of the physician's component society. (*JAMA, March 30, 1957*)

Alcohol and the Common Cold

Alcoholic beverages are helpful in fighting the common cold—at least in the early stages. This was reported by Dr. Noah D. Fabricant, Chicago otolaryngologist, in the March Archives of Otolaryngology, published by the American Medical Association.

Dr. Fabricant said, "Although consumption of alcohol is obviously not a cure for the common cold, its beneficial role in some persons can neither be minimized nor dismissed." Alcohol has long been a popular remedy for warding off colds after chilling or exposure in inclement weather. It increases blood circulation, provides warmth and comfort, induces drowsiness, and promotes a desire to rest. "Once acted upon, the decision to rest in bed can serve a most useful purpose. Rest in bed diminishes the severity of the common cold, limits its spread to others, and reduces the frequency of complications."

But alcohol is valuable in fighting a cold in still another way.

A cold is preceded by a lowering of the temperature in the nasal passages and a constriction of blood vessels within the nose. The passages then become dry and the defense against the cold is weakened. This paves the way for acute infection.

The prime intent on discovering a cold in its early stages is to restore the nasal passage to its normal state. This can best be done by raising the temperature of the membranes.

In the test conducted by Dr. Fabricant, it was found that the nasal temperature could be raised after the consumption of alcohol.

Twelve persons, two with symptoms of a cold, were given one ounce of a blended whiskey. Temperatures were checked before the test began and again at 15 minute intervals following the taking of the alcohol.

All twelve showed a nasal temperature rise within 30 minutes.

According to Dr. Fabricant, the results indicate the physiological usefulness of an alcoholic beverage during the very early stages of the common cold.

Current Currents

THE HOUSE OF DELEGATES of The Medical Society of Virginia has approved the Society's role in the Medicare Program and has authorized further contract negotiations with the Department of the Army. In a resolution adopted by a 52-33 vote on April 13, the Society's negotiators were instructed to attempt to secure a contract based on insurance or indemnity principles.

The Medical Society of Virginia is not scheduled to re-negotiate with the Army before November. However, it is anticipated that the current contract will be extended until that time.

THE FOUNDATION has been laid for some of the most important organizations in the health field to work together in solving the health care problems of the aged. For this purpose the American Medical Association, American Dental Association, American Hospital Association and American Nursing Home Association have established the Joint Council to Improve the Health Care of the Aged.

The objectives of the Council have been announced as: (1) to identify and analyze the health needs of the aged; (2) to appraise available health resources for the aged, and (3) to develop programs to foster the best possible health care for the aged regardless of their economic status.

One of the first jobs of the Council will be to determine exactly what are the health problems of the aged. Research will be intensified and projects for meeting the problem will be activated as rapidly as possible. Sponsoring organizations point out that the need for new programs in this field is accented by the fact that the life expectancy of individuals has been constantly increasing in recent years. In 1935 life expectancy in the United States was an average 60.2 years. Most recent figures indicate the life average expectancy now to be 70.0 years.

The Council plans to work closely with health insurance groups in an effort to improve the coverage of the aged and to see that their insurance dollars go further. It is also believed that much can be done for older people by states and communities and the Council will endeavor to stimulate activities at these levels of government.

RESIDENTS OF THE UNITED STATES see a physician on an average of just under 5 visits a year, according to a National Health Survey. Only 10 per cent of the visits are in the home.

It is reported that our farm population uses physician services at the rate of 3.6 visits per year, rural non-farm population 4.5 visits and urban population 5.1 visits. Two-thirds of all visits involve diagnosis and treatment, and only one-third have to do with preventive care or other services.

DID YOU KNOW that the first American to fly was a physician. Dr. John Jeffries made a ballroom flight in France 175 years ago, and being scientifically minded, carried with him a barometer, thermometer and hydrometer.

A SEMINAR FOR MEDICAL ASSISTANTS is being sponsored by the Fairfax County Medical Society on Thursday, May 22. Approved by the Northern Virginia Medical Council, the seminar will be held in the Woodward & Lothrop Auditorium at Seven Corners and is scheduled to begin at 1:30 p.m.

The program has been especially designed to impress the medical assistant with her importance and responsibilities, and the place she occupies on the medical team. To be covered are such items as the legal status of the medical assistant, telephone techniques, uniform claim forms, public relations fundamentals, and many more. Details concerning registration can be secured from Dr. Carl Parker, 1057 West Broad Street, Falls Church.

A NUMBER OF NEW EXHIBITS have been announced by the AMA and will soon be ready for showings by local medical societies at fairs, schools, home shows and similar public gatherings. Several of the more interesting are:

You Can Reduce—pictures 25 different foods and number of calories in servings shown. Permits visitor to check his weight and answers pertinent questions on reducing.

Poisoning of Children—demonstrates dangers of common household products and depicts those products which are leading causes of poisonings at home.

Health Appraisal of the School Child—highlights principal health appraisal procedures, such as teacher observation, screening procedures, dental and medical examinations and follow-through.

A NEW PAMPHLET entitled "Are You Fit to Drive?" is now available for use in physicians' offices. The pamphlet, prepared by the AMA's Committee on Medical Aspects of Automobile Injuries and Deaths in cooperation with the Center for Safety Education at New York University, is unusually well-done. It covers emotional upsets, driver attitudes, medicines, sleepiness, faulty vision, drinking, old-age, diabetes and certain nerve and health disorders.

The State Office has a supply of the pamphlets on hand and will be pleased to fill requests. Once the supply is exhausted, additional copies can be secured from the Association of Casualty and Surety Companies, 60 John Street, New York 38.

REPRESENTATIVE ROOSEVELT, California, has introduced a bill, H.R. 9834, which would extract social security payments of $637.50 from those persons with $10,000 a year incomes. The bill would raise the tax base from the present $4,200 to $10,000. Also, the taxable income would increase $500 each year that the Consumers Price Index rises as much as 5 points.

1958 ANNUAL MEETING—THE MEDICAL SOCIETY OF VIRGINIA—HOTEL JEFFERSON, RICHMOND—OCTOBER 12-14

Woman's Auxiliary . . . .

*President*_____Mrs. John R. St. George, Portsmouth
*President-Elect*_____Mrs. Charles A. Easley, Danville
*Vice-Presidents*_____Mrs. Girard Thompson, Chatham
Mrs. George Brooks, Richmond
Mrs. Robert Detwiler, Arlington
*Recording Secretary*_____Mrs. James Grinels, Richmond
*Corresponding Secretary*_Mrs. Howard Kruger, Norfolk
*Treasurer*____Mrs. Wyndham B. Blanton, Jr., Richmond
*Publication Chairman*_____Mrs. Paul Pearson, Warsaw

Old Belt.

The Auxiliary to the Old Belt Medical Society held a dinner meeting at the Woodfield Club in South Hill on March 19th with fifteen members present. After a most interesting program given by Mrs. Louise Smith, a business session was held, with Mrs. William Bishop, President, presiding. Plans were made to honor the doctors of the Old Belt Society on Doctors Day and for a luncheon meeting to be held in May with Mrs. J. R. St. George, State President, as guest speaker.

Gladys Y. Bracey (Mrs. L. H.)

Wise.

In the past two months this Auxiliary has had two interesting meetings. The first was a safety program with a talk and moving pictures with commentary by one of our local State troopers. The other was a "Home Lighting" demonstration by the home economist of the Old Dominion Power Company.

Plans were made for observance of Doctors Day which included window displays in the pharmacy, a dinner party at "The Inn", the presentation of red carnation boutonnieres and the request for the wives to send red carnations to their husband's offices.

In March, the Auxiliary received news of the untimely and sudden death of one of its young but faithful members, Mrs. Walter J. Parsel, who only three weeks previous had moved to California from Norton.

Dolores E. Schmidt (Mrs. William F.)
Corresponding Secretary

Newport News-Warwick.

This Auxiliary honored Dr. Benjamin Leo Carleton on Doctors Day. A special party in his honor was given at the home of Dr. and Mrs. W. Ward Anderson, Jr., Seaford, and new trays were given to the Patrick Henry Hospital for the drug shelf in honor of Dr. Carleton.

Dr. Carleton has followed the medical problems of countless Peninsula citizens from birth through old age for more than thirty-eight years.

Fairfax.

Doctor's Day was celebrated in Fairfax with a reception and dinner at the Courthouse Country Club given for the members of the Fairfax Medical Society by the Auxiliary. Each doctor wore a red carnation, gift of his wife. A number of place settings at the banquet table were starred and those seated at these places received prizes. After dinner a Chinese auction was held in which prizes were given by the drawing of numbers.

Mrs. Andrew Tessitore is the retiring president of this Auxiliary and Mrs. Thomas Haggerty is president-elect. Mrs. Joseph Provenzano was chairman for the dinner.

American Medical Association.

The thirty-fifth annual convention to the Woman's Auxiliary to the American Medical Association will be held at the Fairmont Hotel, San Francisco, California, June 23-27. Convention chairmen are Mrs. Matthew N. Hosmer and Mrs. Samuel R. Sherman.

A cordial invitation is extended to all members of the Woman's Auxiliary, their guests and the guests of physicians attending the convention to participate in all social functions and attend the general meetings of the Auxiliary.

Please Note!

Your publications chairman is again asking the local auxiliaries to send in news for the Auxiliary Page in the Monthly.

1. Deadline for materials to be published in the Virginia Medical Monthly is the first day of each month.

2. Remember if you do not see news about your Auxiliary someone has failed to send it in and on time.

3. Be sure to send all activities of interest. This is my only means of knowing about the many things you are doing.

4. Reports should be arranged and worded just as you wish them to appear in the journal—on a separate sheet of paper, please. Your cooperation will save considerable time and effort.

5. I welcome your suggestions in improving our page.

6. Reports from these Committee Chairmen will prevent an empty page during the summer months—Today's Health, A.M.E.F., Recruitment, Bulletin, Mental Health, Safety, Civil Defense, Legislation and Student Loan Fund.

I thank you wholeheartedly for your interest and cooperation. Virginia Drewry McG. Pearson
Publications Chairman

President's Message . . . .

WITHIN the very recent past we have witnessed the development and mass production and use of the Salk poliomyelitis vaccine and the "Asiatic" flu vaccine. The discoveries and development of these materials were rightly hailed throughout the medical world as a tremendous step forward in the never-ceasing battle for life and limb.

Many practicing physicians, however, looked with jaundiced eyes at the buildup and ballyhoo that came with these products. The public was primed with propaganda by every newspaper, radio station, magazine and television outlet in the nation. Many people were nearly scared out of their wits. The products were rushed onto the market with great fanfare only to have all sorts of problems develop. Distribution was spotty, quality and potency of materials varied, recommended methods and amounts of administration changed almost daily depending on who pronounced what at which time of day. And most of all from our viewpoint, the practicing physician was caught in the middle time after time.

From the dawn of medicine the patient has been taught to contact his private physician for advice on his health and the use of medicine. The quieting influence and reassurance that this method brought about was routine for centuries. Its proficiency was attested by its success and was due to the long developed methods of publication, by medical media, of information to physicians first, and then later to the public. Had this process been followed in the above mentioned instances I am sure much unnecessary disturbance could have been avoided.

You may think that all of this is water over the dam and should be forgotten. I bring it up at this point, however, because of recent newspaper stories that have caught my attention. One such story says researchers are on the verge of a breakthrough in the cause of (and defense against) cancer. Another story tells us that certain types of heart disease are about to be conquered. We hear that various other maladies may give up their secrets any day now. I sincerely hope to Heaven that all of these predictions and many more like them are true. And I also sincerely hope that the medical profession, that segment of it that sees the patient and knows and counsels him in his hour of bewilderment and fear, can have the say in who gets how much of what kind of treatment, when and where it is administered and what is a fair price for it, when these remarkable predictions come true. Third parties have tried to dictate each and every one of the above items recently. Their results have been confusing to say the least.

The practicing medical profession, from the AMA down to each individual county medical society, should prepare itself now, with a plan to be followed when and if another great day of liberation from a dangerous malady occurs.

H C Bates, Jr.

President

Editorial....

Dr. Rucker's Book

THE LONG AWAITED "Selected Writings of Marvin Pierce Rucker" appeared the latter part of March and the excellency of the volume justifies the delay in its publication.

Shortly after Dr. Rucker's death in 1953, Dr. E. M. Holmes, Jr., who served with him for many years on the Richmond Board of Health, conceived the idea of publishing in book form the Pen Profiles and the Floral Eponyms which appeared in the Virginia Medical Monthly during the ten years Dr. Rucker edited this journal. A committee was appointed with representatives from the Board of Health, the Richmond Academy of Medicine, the Virginia Medical Monthly, and the Johnston-Willis Hospital to aid Dr. Holmes in the preparation of this memorial to one who had meant so much to Virginia medicine during the half-century he practiced in Richmond.



MARVIN PIERCE RUCKER

Dr. Rucker's orderly method of preserving and indexing his voluminous writings simplified Dr. Holmes' work but the editing of this handsome 200 page book and collecting the 37 excellent engravings must have proved an exhausting task.

Dr. J. Morrison Hutcheson, a lifelong friend and medical associate of Dr. Rucker, prepared a short biography which reminds one anew of the many honors that came

to this kindly, soft spoken scientist. During his busy career he was President of the Richmond Obstetrical and Gynecological Society, the Richmond Academy of Medicine, The Medical Society of Virginia, the South Atlantic Association of Obstetricians and Gynecologists and the American Association of Obstetricians, Gynecologists and Abdominal Surgeons. He also found time to be Chairman of the Section on Obstetrics and Gynecology of the American Medical Association and of the corresponding Section of the Southern Medical Association.

The Pen Profiles include brief biographies of 36 medical leaders from the eighteenth century to modern times. Twelve of these subjects were native Virginians or had close State ties. He wrote interestingly of all but especially so of the "Four Doctors" under whom he studied as an undergraduate at the Johns Hopkins Medical School. His thumb nail sketches frequently were enlivened by personal reminiscences, for Dr. Rucker knew and was known by most of the medical great of his day.

While his Profiles are of the first order, his Floral Eponyms probably are of more lasting value for they doubtless are unique in their present collected form. Dr. Rucker somewhere read that twenty-eight flowers bore the names of physicians. He thought that the list was incomplete and in the process of augmenting it he brought to light nearly one hundred additional examples. In each issue of the Virginia Medical Monthly a new name would be added. Few physicians and even fewer laymen would suspect that Wistaria was named for the anatomist, Dr. Caspar Wistar, or the Gardenia for Dr. Alexander Garden of Charleston, S. C.

Dr. Joel Roberts Poinsett, also of Charleston, gave his name to the Poinsettia. Poinsett's interests were not confined to medicine and horticulture, for he obtained an army commission for John C. Fremont who later became the first Republican presidential candidate but who now is remembered chiefly as one of several Union generals whose military careers were terminated abruptly by Stonewall Jackson in the Valley of Virginia during the Spring of 1862. The botanical designation of both the Iris and Azalea carry the name of Dr. Engelbrecht Kaempfer, a chief surgeon in the Dutch East India Company. The Magnolia was named after Dr. Pierre Magnol, Professor of Medicine at Montpellier who introduced this Southern favorite into Europe. Weigelia, Dahlia, Zinnia, Lettsomia, Grindelia, and Lobelia are other examples of flowers that bear the names of physicians. Even Amsonia was named for Dr. Amson of Williamsburg and York County. Dr. Amson, incidentally, shared with Dr. Jacob Tabernaemontanus of Zweibrucken, Germany, the distinction of having Amsonia Tabernaemontana named for him.

In addition to the data contained in the two foregoing sections a complete bibliography is appended which lists about two hundred scientific papers by Dr. Rucker which appeared from 1905 to 1952. Forty-six of these articles were published in the Virginia Medical Monthly which indicates his esteem and affection for this journal.

Physicians who were privileged to know Dr. Rucker will wish to have this reminder of his many interests in obstetrics and the history and amenities of medicine. Recent graduates who did not have the opportunity of sharing Dr. Rucker's friendship should avail themselves of the opportunity to make a belated acquaintance with this physician, scholar and gentleman through the medium of his "Selected Writings."

H. J. W.

Society Proceedings . . . .

Northern Virginia Clinical Assembly.

The Ninth Annual Assembly, sponsored by the Alexandria, Arlington County and Fairfax County Medical Societies, was held on April 13th in the Wakefield High School Auditorium, Arlington. Guest lecturers were from Jefferson Medical College, Philadelphia, and the following program was presented: Differential Diagnosis of Chest Pain by Dr. William A. Sodeman; Abnormal Uterine Bleeding by Dr. Abraham E. Rakoff; Tumors Commonly Encountered in Children by Drs. John H. Gibbon, Jr., and Hans G. Keitel; and Maintenance of High Standards of Laboratory Care by Dr. F. William Sunderman. Round table sectional meetings were held in the afternoon.

The Fourth District Medical Society

Met at the Southside Community Hospital, Farmville, on April 8th, in conjunction with the annual Spring Institute of the Hospital. The following program was presented: Diagnostic Features in Cardiovascular Diseases Amenable to Surgery by Dr. J. Francis Dammann; Some Points in the Management of Anesthesia for Cardiovascular Surgery by Dr. Douglas W. Eastwood; and The Surgical Management of Certain Types of Cardiovascular Diseases by Dr. William H. Muller, Jr. All speakers are from the University of Virginia, Charlottesville.

Dr. Robert D. Keeling, South Hill, is president of this Society; Dr. William Grossmann, Petersburg, vice president, and Dr. Clyde W. Vick, Jr., Petersburg, secretary-treasurer.

News Notes . . . .

New Members.

The following new members have been admitted into The Medical Society of Virginia since the list published in the April issue of the Virginia Medical Monthly:

Robert F. Barbe, M.D., Bristol
Francis Elwood Barrett, M.D., Midlothian
Courtney Cox Bowen, M.D., Richlands
Herman Wallace Brubaker, M.D., Floyd
David John Cracovaner, M.D., Newport News
Catherine Elizabeth Craun, M.D., Harrisonburg
Thomas Winston Gouldin, M.D., Norfolk
Edward T. Holden, M.D., Staunton
Waddie Pennington Jackson, M.D., Bedford
Joseph Emory Mathias, M.D., Lynchburg
Robert Chester Patten, M.D., Floyd
John Rebman, III, M.D., Richmond
Charles Glenn Smith, M.D., Arlington
Lewis Emmor Wells, M.D., Richmond
James Phillip Westmoreland, M.D., Norfolk

Tribute Paid Dr. Sinclair.

Dr. James W. Sinclair, Warrenton, was recently presented with a scroll, bearing in Old English letters the names of 381 people who had contributed to the Fund for the Operating Room of the new Hospital. The scroll read as follows: "To Dr. James Ward Sinclair: In Witness that the Operating Room of the Fauquier Hospital is equipped as a mark of the enduring appreciation and affection of his patients and friends." There was also given him a handsomely bound book in which were numerous letters from various donors. The patients and friends of Dr. Sinclair contributed over $11,000.00 with which he was to purchase operating equipment.

Golf Tournament.

The American Medical Golfing Association is holding its annual golf tournament in conjunction with the A.M.A. Convention June 23, at the beautiful Olympic Lakeside Golf and Country Club, San Francisco. This will be a whole day of rest and relaxation with golf, luncheon, banquet, and a prize for everyone. No stone has been left unturned to assure the very best. Tee off time 8 A.M. to 2 P.M. All golfing doctors are invited to attend. Handicaps scratch to 30 in flights.

For information contact James J. Leary, M.D., Secretary, 450 Sutter Street, San Francisco, California.

Dr. J. Warrick Thomas,

Richmond, will present a paper at the scientific session of the Florida Allergy Society to be held in Miami Beach, May 10-14. His subject will be Treatment of Severe Allergic Reactions to Insect Stings and Bites.

Dr. Melvin B. Lamberth, Jr.,

Kilmarnock, announces the association of Dr. Harvey W. Goode, and the formation of the Kil-

marnock Clinic and Maternity Hospital. Dr. Goode was formerly engaged in the general practice of medicine in Dinwiddie County.

Former Grady House Staff.

An organization is being formed of all former members of the house staff of the Grady Memorial Hospital in Atlanta. Two years ago, letters were sent to all known former House Officers. However, many names were not included because of an incomplete mailing list. If you did not receive a notice or failed to reply for any reason, please notify the Grady Hospital Clinical Society, Office G-610, 80 Butler Street, S. E., Atlanta, Georgia. Give your name and address and when you were at Grady. Plans are now being made for the first Annual Meeting in the fall.

Stuart Circle Ex-Interns Club.

At a recent meeting of this Club, Dr. John Powell was elected to succeed Dr. J. Edgar Stevens as president. Dr. Charles Ballow was named vice-president, and Dr. William B. Moncure, secretary.

Dr. Merritt W. Foster, Jr.,

Associate professor of clinical psychiatry at the Medical College of Virginia, was principal speaker for the annual meeting of the Lynchburg Guidance Center held on March 24th.

Dr. G. Benjamin Carter,

Richmond, who retired in November as attending physician at the City Home, has returned to the home as medical director.

Drs. James H. Whitfield and Allan Hecht have also been employed as physicians on a half-time basis.

Virginia Heart Association.

Dr. Alto Feller, Charlottesville, and Dr. Harry C. Foster, Martinsville, have been appointed to the Medical Advisory and Research Committee of the Virginia Heart Association. Dr. Reverdy H. Jones, Jr., Roanoke, is chairman of the committee.

Dr. John A. Sims,

Alexandria, was presented the fifth Douglas Southall Freeman award by the Virginia Tuberculosis Association at its annual meeting in Roanoke, March 18th. This award is the highest honor conferred by the Association upon individuals who have contributed significantly to the control of tuberculosis in Virginia.

Dr. John G. Sellers,

Norfolk, participated in a course in Reconstructive Nasal Surgery which was presented by the Department of Otolaryngology of the University of Cincinnati College of Medicine, April 12-19.

Board of Medical Examiners.

The next meeting of the Virginia Board of Medical Examiners will be held at the Richmond Hotel, Richmond, Virginia, June 11, 1958 and the examinations will be held in the same hotel June 12th to 14th inclusive.

May 20th is the deadline for receipt of applications for the examination. The Secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.

Dr. Edwin P. Jordan,

Charlottesville, has been elected president of the Thomas Jefferson chapter of the Sons of the American Revolution.

Dr. Richard B. Bowles

Has been named as honorary chairman of the annual Mathews Spring Festival.

The Virginia Council on Health and Medical Care

Has been presented with an award for the best single promotion in public relations during 1957 in the State of Virginia by the Virginia Public Relations Conference. The Council won the award for its Tangier Island project.

Dr. Houston L. Bell,

Roanoke, will discuss the subject of Tympanoplasty, Reconstruction of the Middle Ear Sound Mechanism and Conduction at the American Medical Association convention in San Francisco.

American Goiter Association.

The annual meeting of this Association will be held in San Francisco, June 17-19, at the St. Francis Hotel. Hotel Reservations must be secured by writing to the Goiter Housing Bureau, Room 300, 61 Grove Street, San Francisco, California, and be accompanied by a deposit of $10.00 per room.

The Gerontological Society, Inc.

The eleventh annual scientific meeting of the Gerontological Society, Inc., will be held at the Bellevue Stratford Hotel, Philadelphia, Pennsylvania, November 6, 7, and 8, 1958.

Abstracts of papers for the program should be submitted to the Program Committee for consideration by July 1 1958. Abstracts should be sent to the sub-chairmen of the section in which the author(s) elect to give their paper.

The sub-chairmen are: *Clinical Medicine*—Dr. Ewald Busse, Duke University Hospital, Durham, North Carolina; *Biology*—Dr. Morris Rockstein, Department of Physiology, New York University, 550 First Avenue, New York 16, New York; *Psychology*—Dr. Ethel Shanas, National Opinion Research Center, 5711 South Woodlawn Avenue, Chicago, Illinois; and *Sociology*—Dr. W. M. Beattie, Jr., Department of Sociology, Washington University, St. Louis, Missouri.

Exact details as to the length of a presentation and its place on the program will be made available by the appropriate sub-chairmen. Scientific and commercial exhibits are scheduled with a series of social functions and a meeting open to the public. Chairman of the Exhibitions Committee is Dr. Leo Gitman 813 Howard Avenue, Brooklyn 12, New York.

The American College of Gastroenterology

Announces that its Annual Course in Postgraduate Gastroenterology will be given at the Jung Hotel in New Orleans, La. on October 23, 24, 25, 1958.

The Course will again, as usual, be under the direction and co-chairmanship of Dr. Owen H. Wangensteen, Professor of Surgery of the University of Minnesota Medical School, who will serve as surgical co-ordinator, and Dr. I. Snapper, Director of Medical Education, Beth-El Hospital, Brooklyn, N. Y., who will serve as medical co-ordinator. Drs. Wangensteen and Snapper will be assisted by a distinguished faculty selected from the medical schools in and around New Orleans.

The subject matter to be covered in the Course, from a medical as well as surgical viewpoint, will be essentially, the advances in diagnosis and treatment of gastrointestinal diseases and a comprehensive discussion of diseases of the mouth, esophagus, stomach, pancreas, spleen, liver and gallbladder, colon and rectum.

For further information and enrollment write to the American College of Gastroenterology 33 West 60th Street, New York 23, N. Y.

Virginia Association of Medical Assistants.

The second annual meeting of this Association was held in Petersburg, March 8-9, with approximately fifty members in attendance. Mrs. Elva Spain, Petersburg, was elected President, and Mrs. Mildred Phippen, Richmond, was named President-Elect. Mrs. Frances Mercer, Richmond, was installed as Corresponding Secretary, and Mrs. Mary Gowen, Lynchburg, as treasurer.

Guest speakers were Dr. Abner Robertson, Director of the Virginia Association for Mental Health, and Mrs. William C. Comstock, vice-president of the Physicians Products Company.

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Obituaries....

Dr. Foy Vann,

Prominent orthopedic surgeon of Norfolk, died March 15th after a month's illness. He was seventy-six years of age and a graduate of the Medical College of Virginia in 1905. Dr. Vann began his practice in Whaleyville but later did graduate work in orthopedics and located in Norfolk in 1919. He was on the staffs of the Norfolk General, Leigh Memorial, Maryview and King's Daughters Hospitals. From 1928 on, Dr. Vann held the Newport News Kiwanis Club's Weekly Clinic for crippled children. He was so beloved for this activity by the people of Newport News that the Kiwanis Club there honored him each year with a special dinner called "Dr. Foy Vann Night". He also devoted much time to other orthopedic clinics throughout the Tidewater area. Dr. Vann was a charter member of the American Academy of Orthopedic Surgeons. He was a Life Member of The Medical Society of Virginia, having joined in 1910.

Dr. Vann is survived by his wife and three sons.

Dr. Samuel Alexander Vest, Jr.,

Chairman of the Department of Urology of the University of Virginia, died April 6th of a heart attack. He was a native of North Carolina and fifty-three years of age. Dr. Vest received his medical degree from Johns Hopkins University in 1930 and was a member of the Johns Hopkins Hospital staff before coming to the University of Virginia in 1939. He was a member of the American Urological Association, the Mid-Atlantic section of the American Urological Association, the American Association of Genitourinary Surgeons and a member of the residency review committee for urology of the American Medical Association. Dr. Vest had been a member of The Medical Society of Virginia since 1941.

His wife, two daughters and two sons survive him.

Dr. Louis Knight Leake,

Goochland, died March 14th. He was seventy-eight years of age and a graduate of the former University College of Medicine, Richmond, in 1903. Dr. Leake was a former president of the Bank of Goochland and served as county treasurer from 1919 to 1955. He was a Life Member of The Medical Society of Virginia, having joined in 1904.

His wife and a son survive him.

Dr. William Edward Brown,

Charlottesville, died March 17th, at the age of seventy-three. He was a graduate of the Baltimore Medical College in 1908. Dr. Brown retired in 1944 after 23 years as superintendent and medical director of Blue Ridge Sanatorium. He had also served as a member of the faculty of the University of Virginia Medical School. Dr. Brown had been a member of The Medical Society of Virginia for forty-nine years.

His wife, a sister and two brothers survive him.

Dr. Benjamin Atwood Hord,

Richmond, died March 23rd. He was eighty years of age and a graduate of the Medical College of Virginia in 1898. Dr. Hord had practiced in Richmond for fifty-nine years. He was active in the Masonic Order, being a member and past master of Fraternal Lodge No. 53, AF&AM, past high priest of the Richmond Royal Arch Chapter, a member of the Richmond commandery and Acca Temple Shrine, and a past patron of Areme Chapter, Order of Eastern Star. Dr. Hord was a Life Member of The Medical Society of Virginia, having joined in 1920.

His wife and a daughter survive him.

Dr. Samuel Weinstein,

Richmond, died April 3rd, at the age of sixty-two. He was a graduate of the Medical College of Virginia in 1925. Dr. Weinstein was a Mason and in former years he served as physician for the Richmond Arrows, a semi-professional football team. He was a veteran of World War I. Dr. Weinstein had been a member of The Medical Society of Virginia for twenty-eight years.

His wife and two daughters survive him. A brother is Dr. A. I. Weinstein with whom he was associated in the practice of medicine.

Dr. Samuel Byron Pope,

Norfolk, died April 3rd after a long illness. He was fifty-three years of age and a graduate of the Medical College of Virginia in 1930. Dr. Pope had practiced in Norfolk for the last twenty-six years. He was a Mason and a member of the Norfolk Photo Club. Dr. Pope had been a member of The Medical Society of Virginia since 1940.

His wife and a daughter survive him.

Dr. Savage.

Dr. Millard B. Savage, prominent in the field of Obstetrics and Gynecology, and beloved by all who knew him, died February 10, 1958, after an illness of several years. He was 61 years of age, born in Nansemond County, Virginia. Dr. Savage was graduated from the University of Virginia in 1921. His education was interrupted during World War I when he joined the Naval Reserves. After the War he interned in the Public Health Service in Minneapolis, Women's Hospital, New York, and Lying-In Hospital, New York.

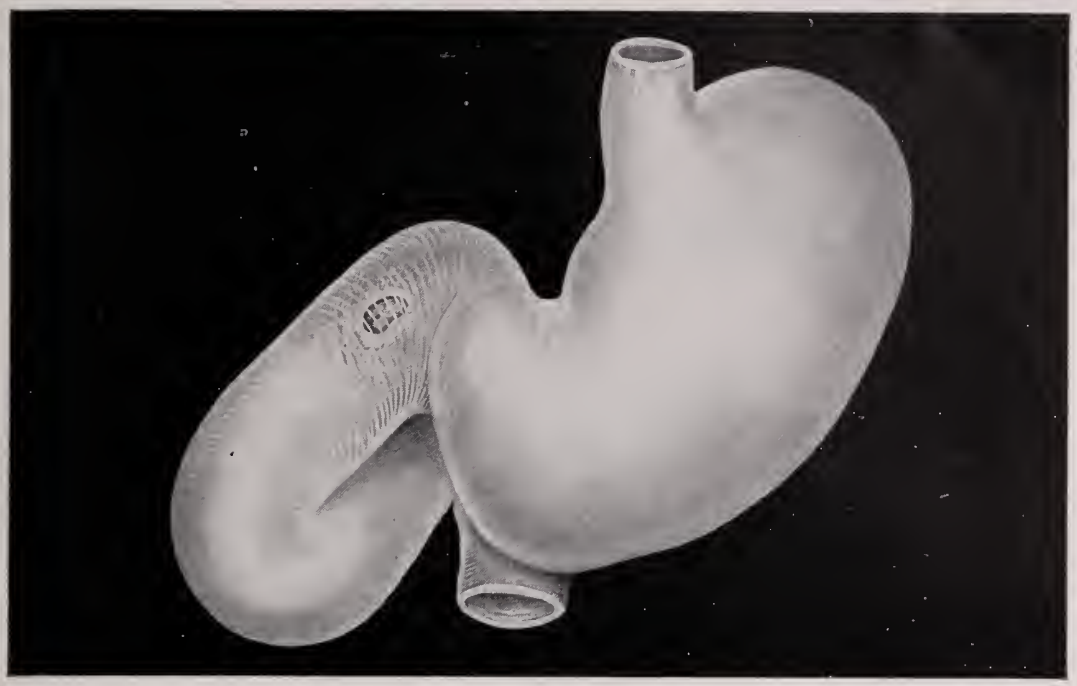
Dr. Savage was President of the Norfolk County Medical Society in 1947-1948, President of the Virginia Obstetrical and Gynecological Society in 1957. He served as President of the Staff of Norfolk General Hospital and Leigh Memorial Hospital, and was on the Staff of DePaul Hospital. He was a Diplomate of the American Board of Obstetrics and Gynecology and a member of the American College of Surgeons, South Atlantic Association of Obstetrics and Gynecology, South Eastern Surgical Congress, Norfolk County Medical Society, Southern Medical Association, Seaboard Medical Association, Medical Society of Virginia, American Medical Association, Tri-State Medical Society, and various civic organizations. Dr. Savage will be greatly missed by both his friends and associates.

THEREFORE, LET IT BE RESOLVED that we extend our sympathies to the family of the late Dr. Savage in the great loss which they sustained.

BE IT FURTHER RESOLVED that a copy of this resolution be recorded in the Minutes of the Norfolk County Medical Society and copies sent to the family and the Virginia Medical Monthly.

W. A. PORTER, M.D.
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*Lichstein, J.; Morehouse, M. G., and Osmon, K. L.: Pro-Banthīne in the Treatment of Peptic Ulcer. A Clinical Evaluation with Gastric Secretory, Motility and Gastroscopic Studies. Report of 60 Cases, Am. J. M. Sc. *232*:156 (Aug.) 1956.

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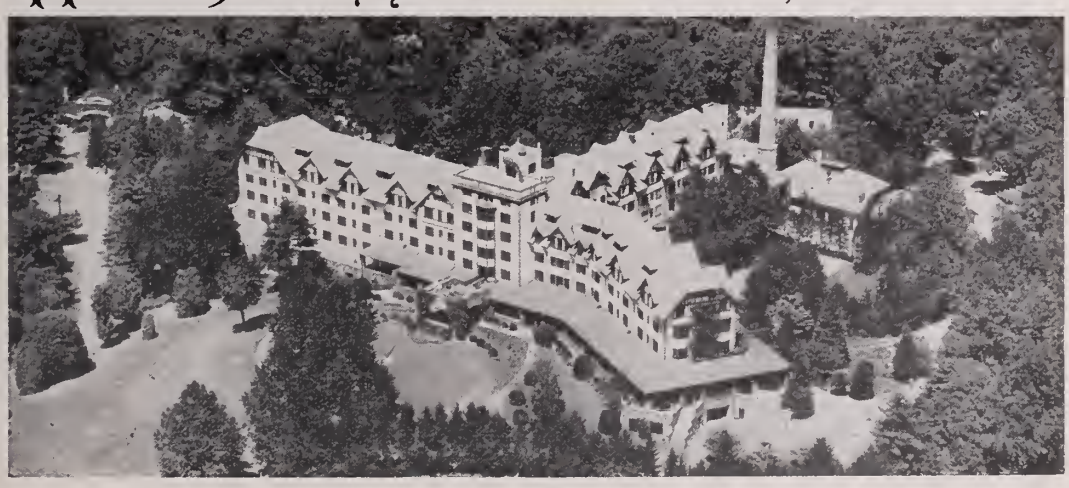
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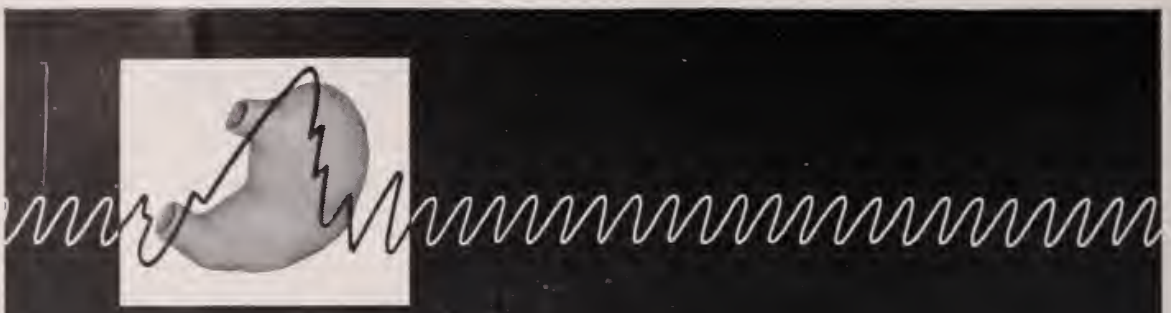
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* 1. Clyman, S. G.: Postgrad. Med. *21*:309, 1957.
2. Bleiberg, J.: J. M. Soc. New Jersey *53*:37, 1956.
3. Abrams, B. P., and Shaw, C.: Clin. Med. *3*:839, 1956.
4. Welsh, A. L., and Ede, M.: Ohio State M. J. *50*:837, 1954.
5. Bleiberg, J.: Am. Practitioner *8*:1404, 1957.

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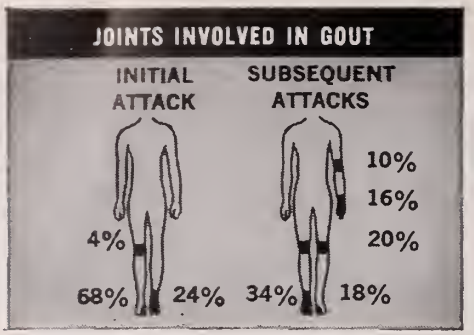


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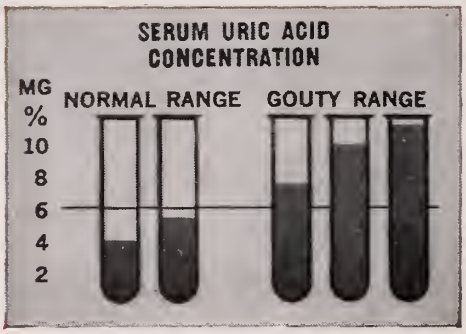
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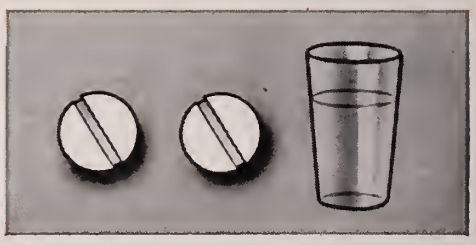
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1. Hodges, F. T.: *GP* 14:86, Nov., 1956.

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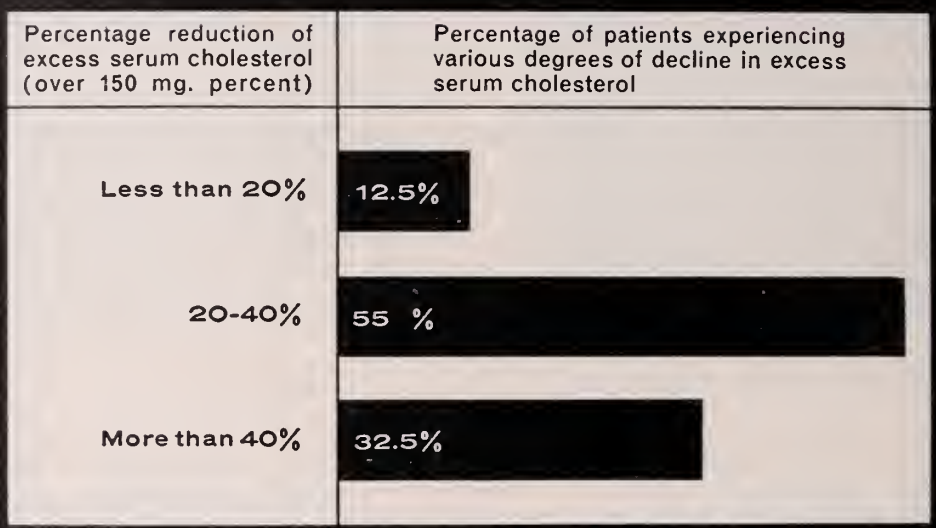


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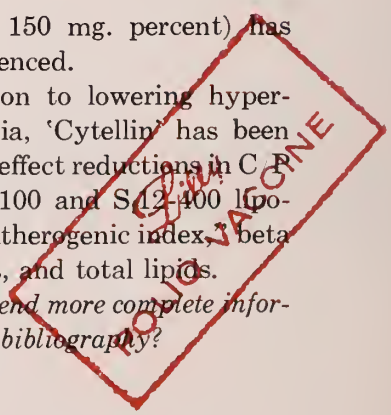
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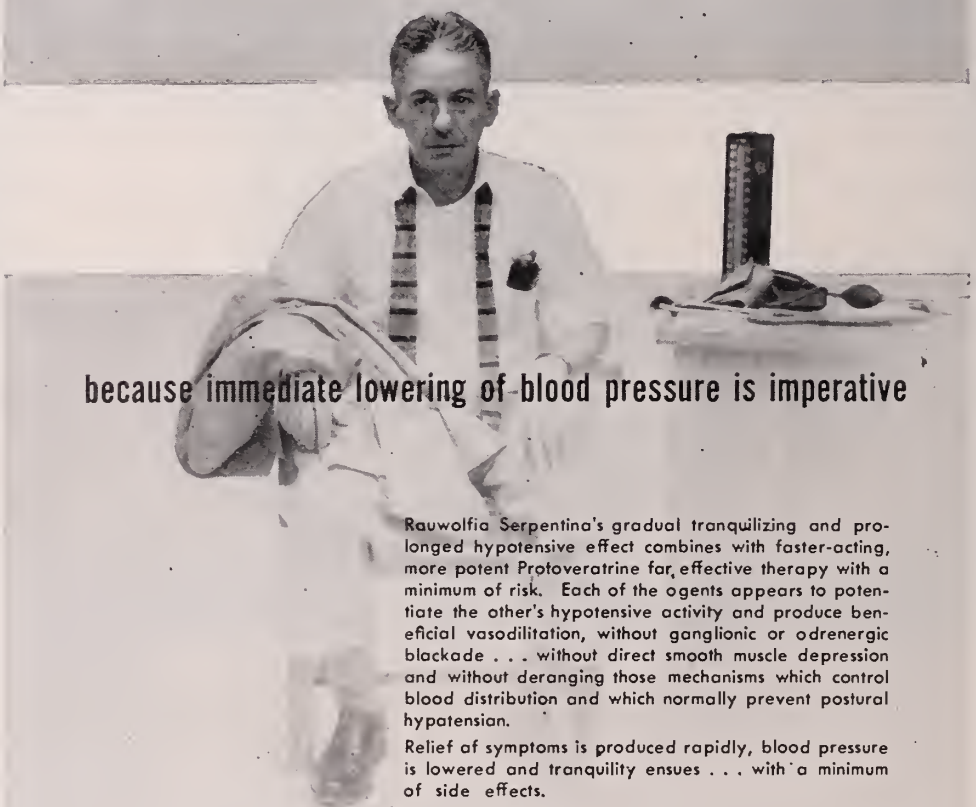


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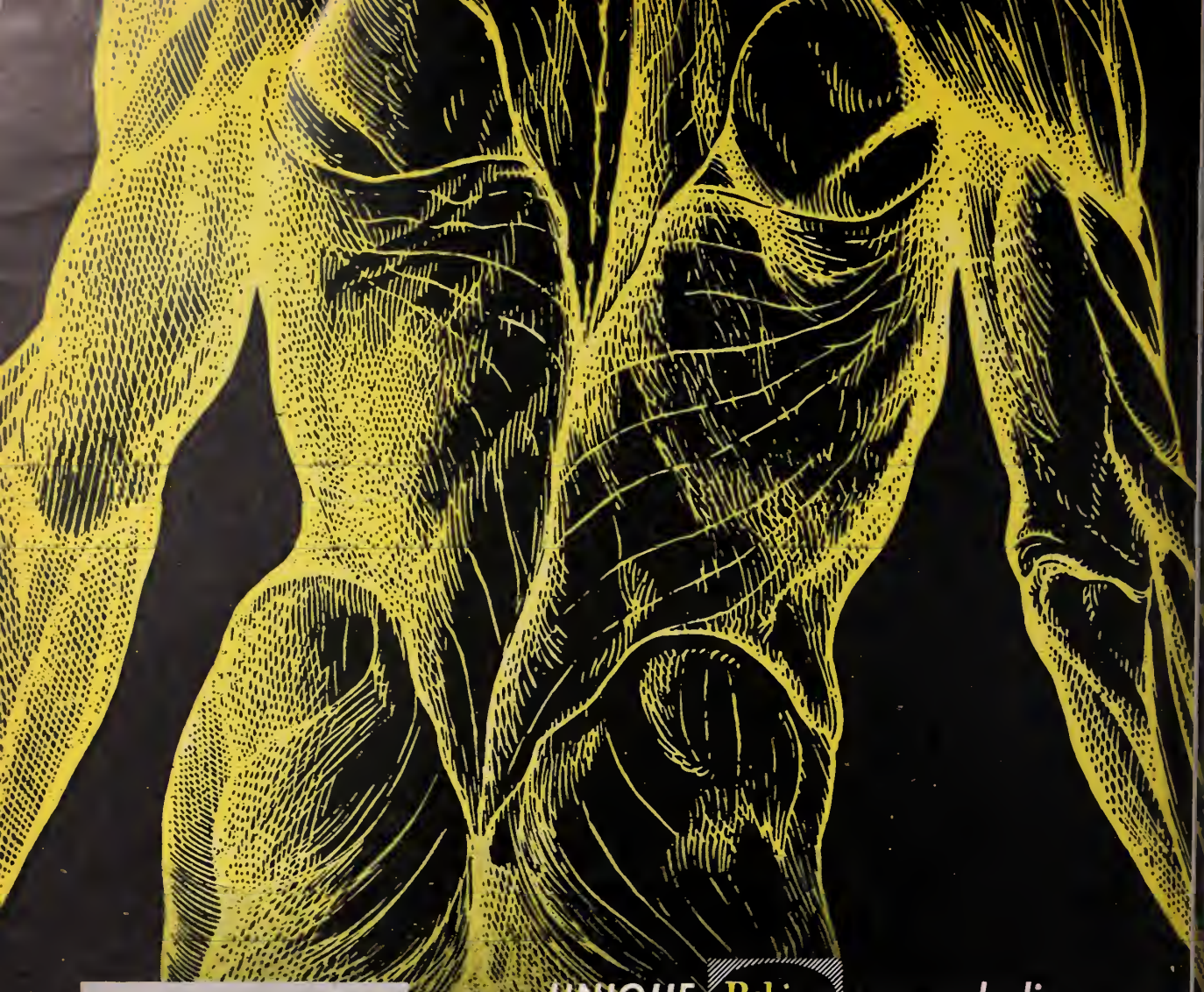
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base or the hydrochloride alone. In addition, the average levels derived from the tetracycline base or the chlortetracycline base were higher than those produced by the corresponding hydrochloride though lower than those resulting from the mixture containing the base and sodium metaphosphate. In the study with chlortetracycline[6] capsules containing a mixture of the hydrochloride and sodium metaphosphate were also included in the crossover, and the average levels produced by these capsules were the same as with the mixture of chlortetracycline base with sodium metaphosphate.

Although the enhancement of blood levels of tetracycline by phosphate, either complexed to the tetracycline or mixed with the base or the hydrochloride, thus seemed fairly well established, some doubts still remained because certain reliable observers (including many whose results have not been published) failed to confirm the findings with the materials and methods they used. Further confusion seemed to be added by a subsequent report of Welch et al.,[7] who, in repeating a crossover study with capsules of tetracycline phosphate complex and tetracycline hydrochloride with and without sodium metaphosphate, found [illegible]

antibacterial activity than was observed in their absence. Oil and sorbitol did not interfere with tetracycline absorption.

Dicalcium phosphate is widely used as a filler in various capsules, including those of the tetracyclines. The authors cite a large number of other studies that implicate the presence of calcium ions as the cause of the reduced absorption of tetracyclines and show that citric acid can partially neutralize this effect. The depressing effect of food on the serum levels of tetracycline is likewise explained by the goodly amount of minerals contained in commercial laboratory diets, and they postulate that the multivalent cations may be responsible for the poorer absorption of the drug. The authors could not explain the failure of citric acid to enhance serum concentrations when administered with tetracycline base in contrast to its marked effect when given as the hydrochloride. However, they hypothesized that the ability of citric acid to enhance serum levels of tetracycline is related to its ability to form complexes [illegible]

"...Tetracycline hydrochloride and citric acid, in an encapsulated mixture, produced higher serum concentrations and greater urinary excretions, and hence better absorption of tetracyclines, than any other preparation studied..."

[illegible] metaphosphate complex.

[illegible] addendum to the last mentioned paper of [illegible]ch et al.[7] indicates that in their study the capsules of tetracycline hydrochloride, chlortetracycline hydrochloride and tetracycline phosphate complex all contained dicalcium phosphate as a filler, whereas the capsules containing citric acid and sodium hexametaphosphate did not contain any dicalcium phosphate. This could clearly explain the discrepancies noted in that study.[7] Likewise, the inconsistencies in other studies may very well have been due to the [illegible] of calcium as fillers in some [illegible] others.

[illegible] however,

Editorial.
The New England Journal of Medicine.
258:97-99, (January 9) 1958.

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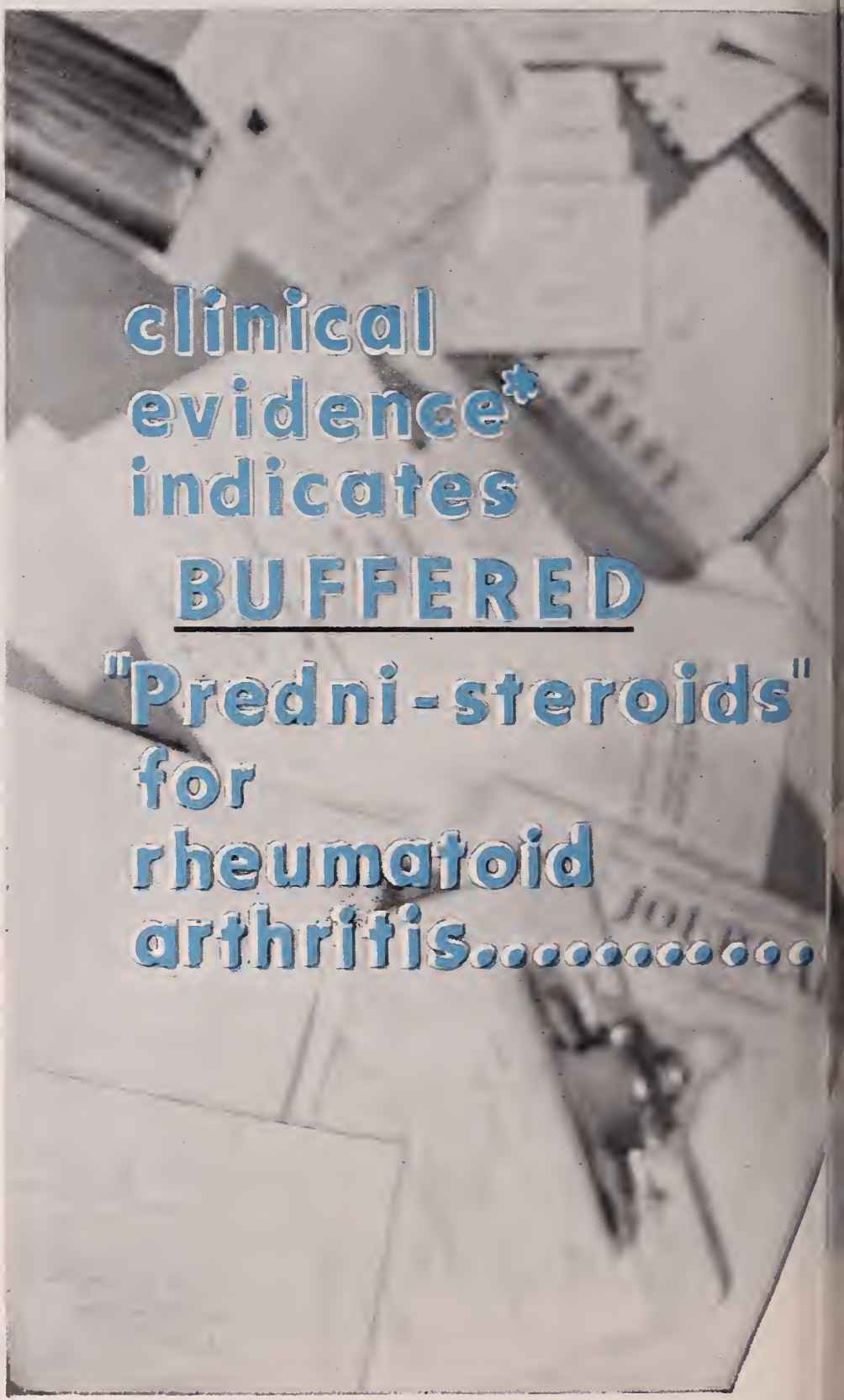
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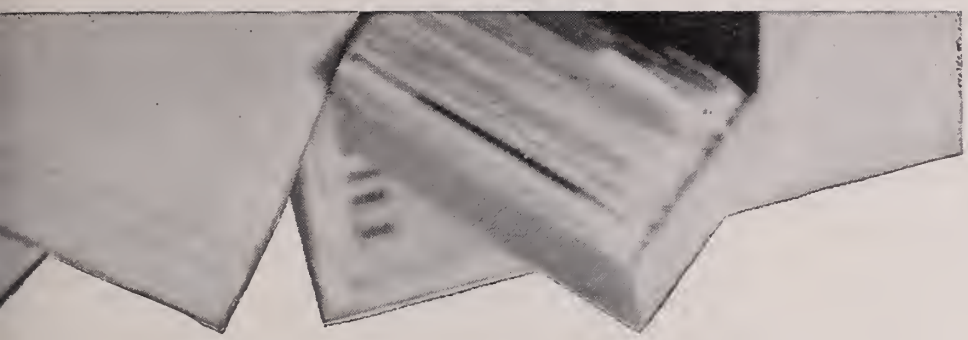
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iew of the beneficial re-observed when antacids d diets were used concom-th prednisone and predni-e feel that these measures e employed prophylacti-offset any gastrointestinal ts."—Dordick, J. R. *et al.*: te J. Med. 57:2019 (June .

*"It is our growing conviction that all patients receiving oral steroids should take each dose after food or with adequate buffering with aluminum or magnesium hydroxide preparations."—Sigler, J. W. and Ensign, D. C.: J. Kentucky State M. A. 54:771 (Sept.) 1956.

*"The apparent high incidence of this serious [gastric] side effect in patients receiving prednisone or prednisolone suggests the advisability of routine co-administration of an aluminum hydroxide gel."—Bollet, A. J. and Bunim, J. J.: J. A. M. A. 158:459 (June 11) 1955.

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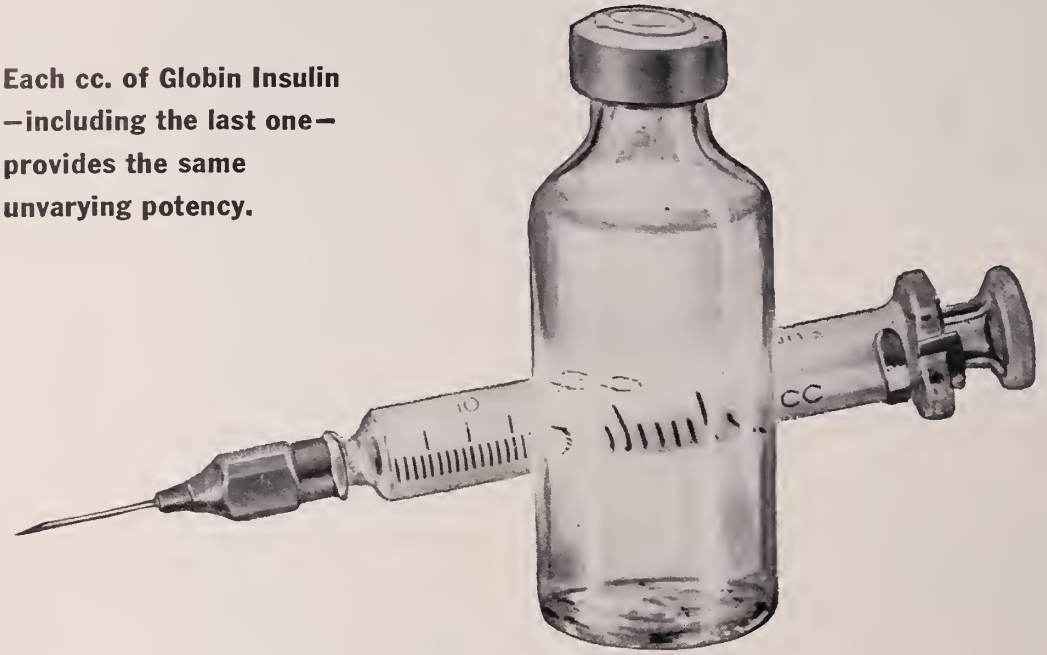


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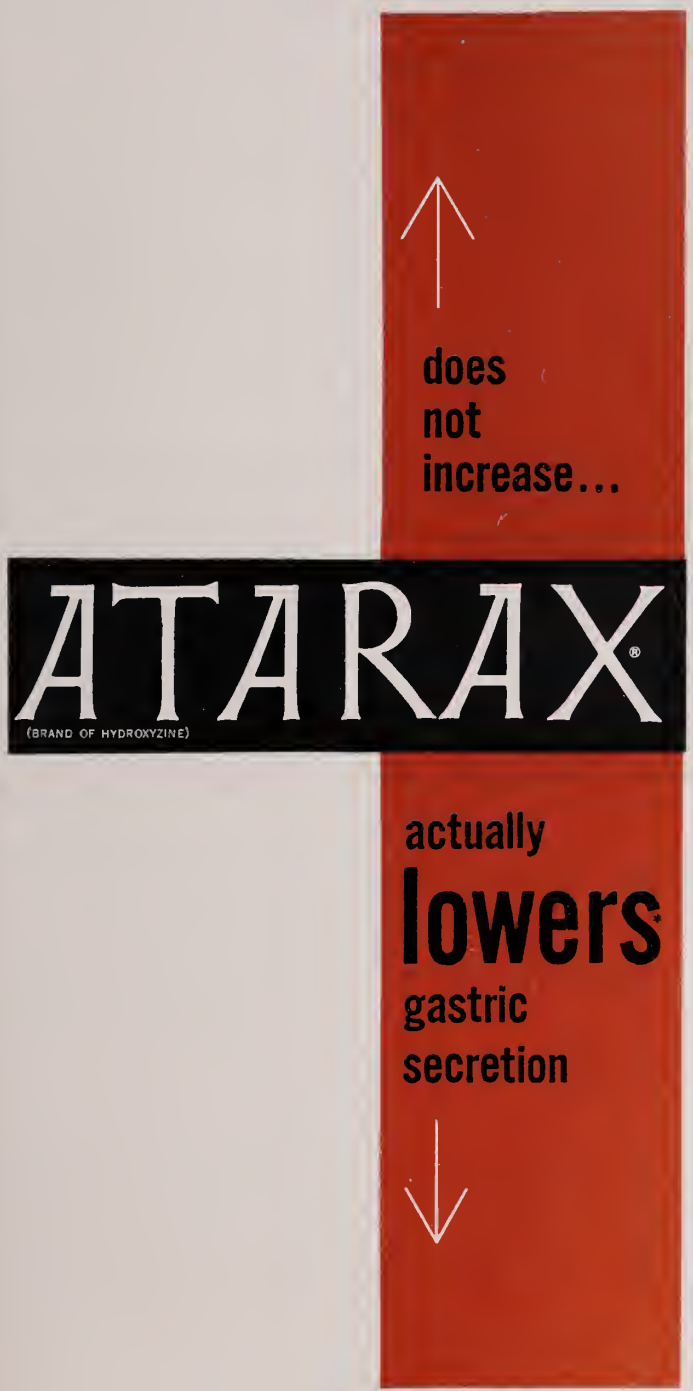
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references: 1. Strub, I. H.: Personal communication. 2. Ayd, F. J., Jr.: presented at Ohio Assembly of General Practice, 7th Annual Scientific Assembly, Columbus, September 18-19, 1957.

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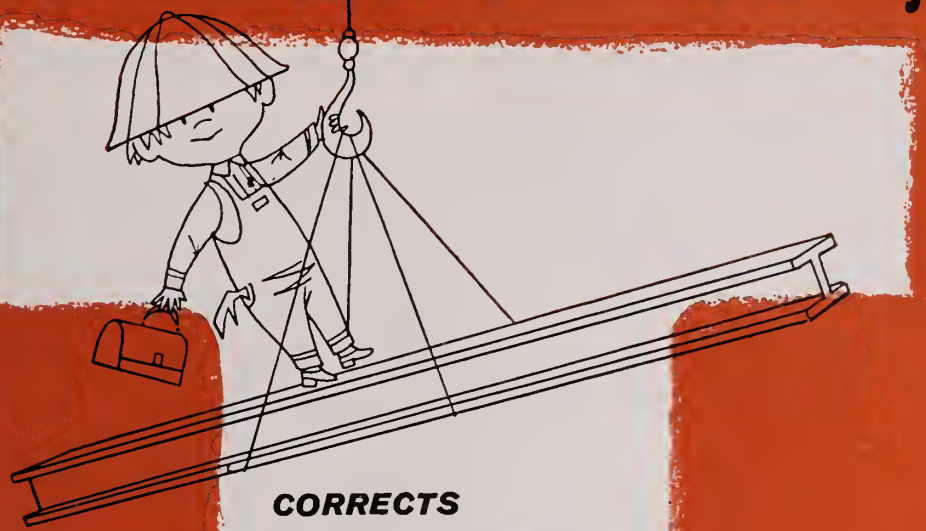
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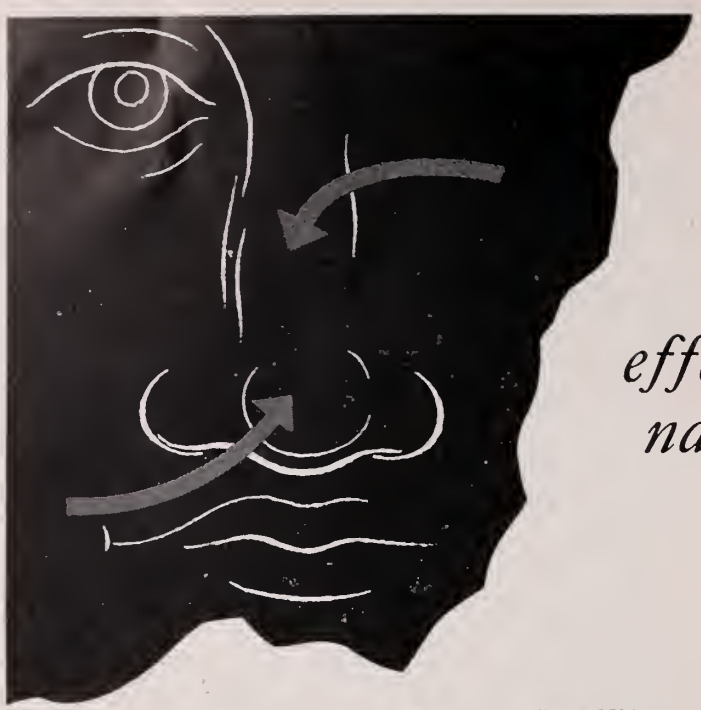
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REFERENCES: (1) Roy, T. E.; Collins, A. M.; Craig, G., & Duncan, I. B. R.: *Canad. M.A.J.* 77:844 (Nov. 1) 1957. (2) Schneierson, S. S.: *J. Mt. Sinai Hosp.* 25:52 (Jan.-Feb.) 1958. (3) Hasenclever, H. F.: *J. Iowa M. Soc.* 47:136, 1957. (4) Rhoads, P. S.: *Postgrad. Med.* 21:563, 1957. (5) Caswell, H. T., and others: *Surg. Gynec. & Obst.* 106:1, 1958. (6) Josephson, J. E., & Butler, R. W.: *Canad. M.A.J.* 77:567 (Sept. 15) 1957. (7) Petersdorf, R. G.; Curtin, J. A., & Bennett, I. L., Jr.: *Arch. Int. Med.* 100:927, 1957. (8) Waisbren, B. A., & Strelitzer, C. L.: *Arch. Int. Med.* 101:397, 1958. (9) Holloway, W. J., & Scott, E. G.: *Delaware M. J.* 29:159, 1957. (10) Murphy, J. J., & Rattner, W. H.: *J.A.M.A.* 166:616 (Feb. 8) 1958. (11) Neter, E., & Hodes, H. L.: *Pediatrics* 20:362, 1957. (12) Woolington, S. S.; Adler, S. J., & Bower, A. G., in Welch, H., & Martí-Ibañez, F.: Antibiotics Annual 1956-1957, New York, Medical Encyclopedia, Inc., 1957, p. 365.

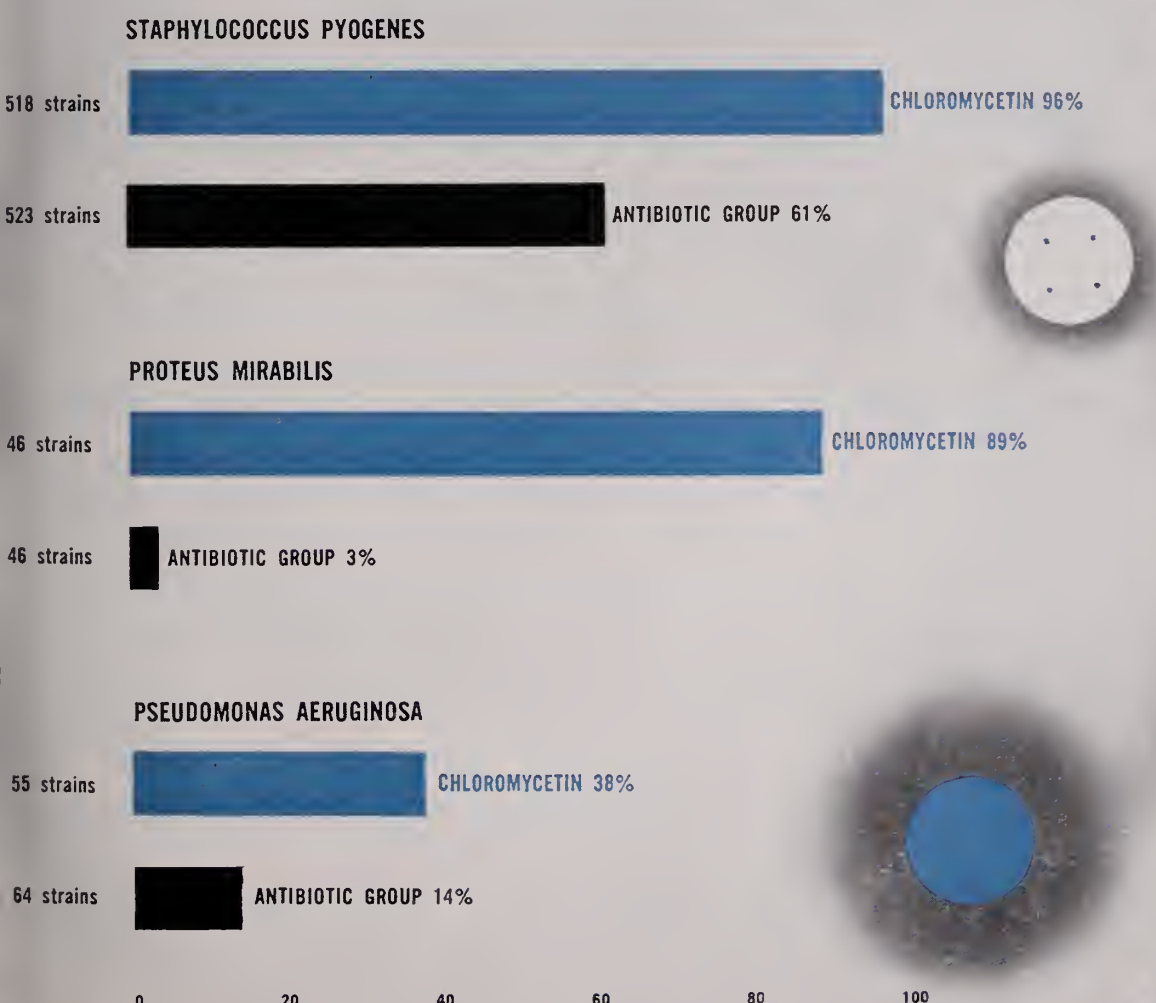
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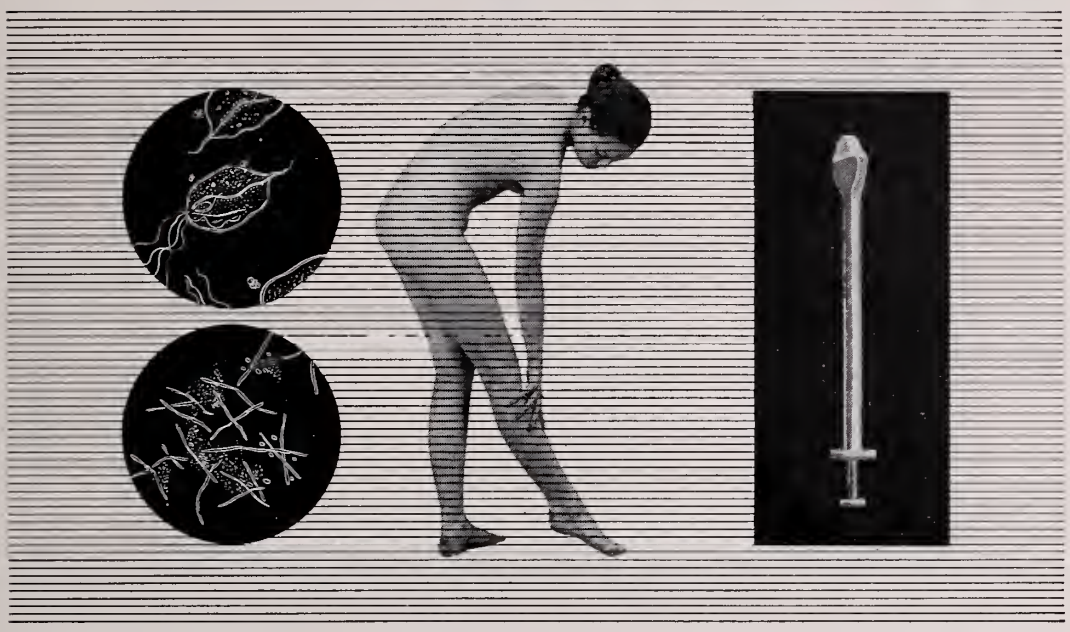
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2. Pitt, M. B.: Leukorrhea, Causes and Management, J.M.A. Alabama *25:*182 (Feb.) 1956.
3. Lang, W. R.: Recent Advances in Vaginitis, Philadelphia Med. *51:*1494 (June 15) 1956.

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2. Codling, J. W., and Lowden, R. J.: Northwest Med. *57*:331 (March) 1958.

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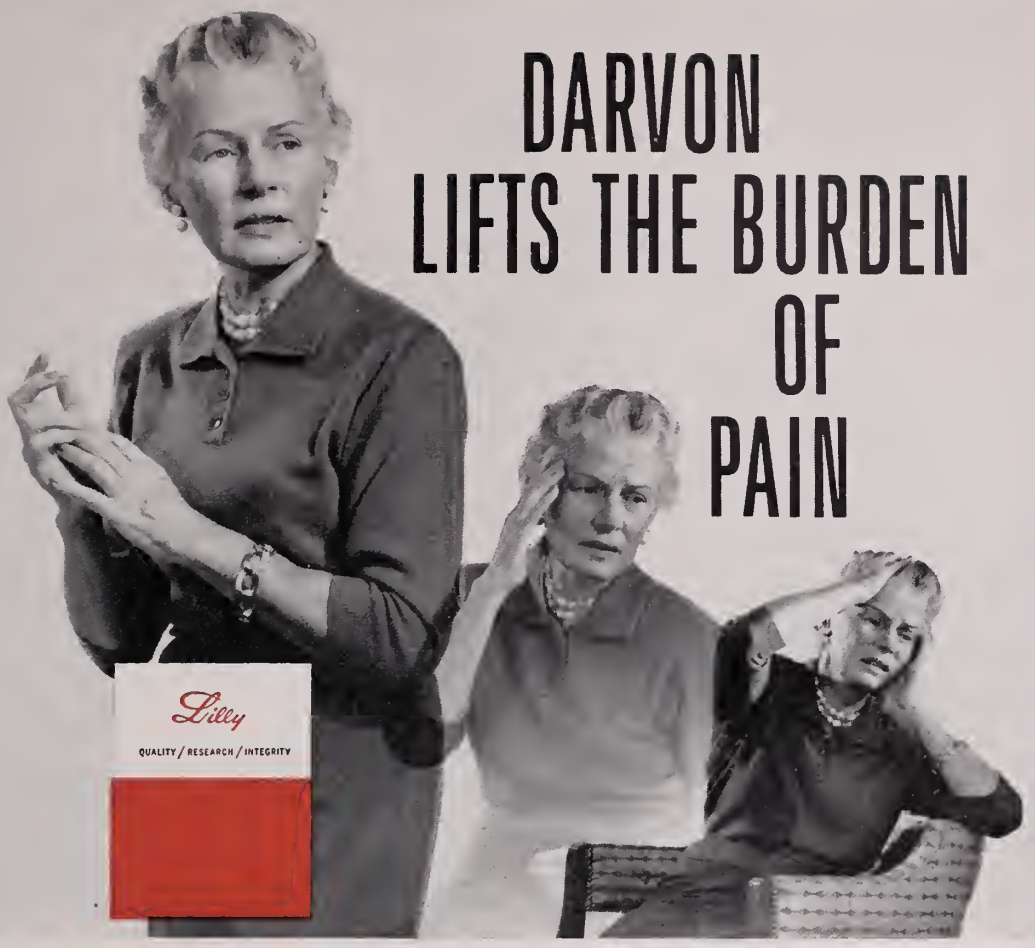


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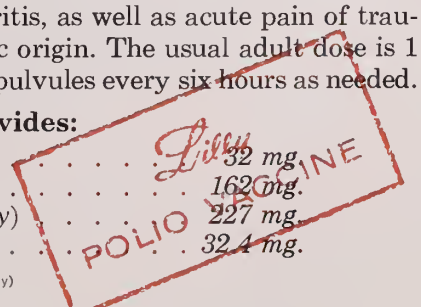
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*Howell, C. M., Jr.: Am. Pract. & Digest Treat. 8:1928, 1957.

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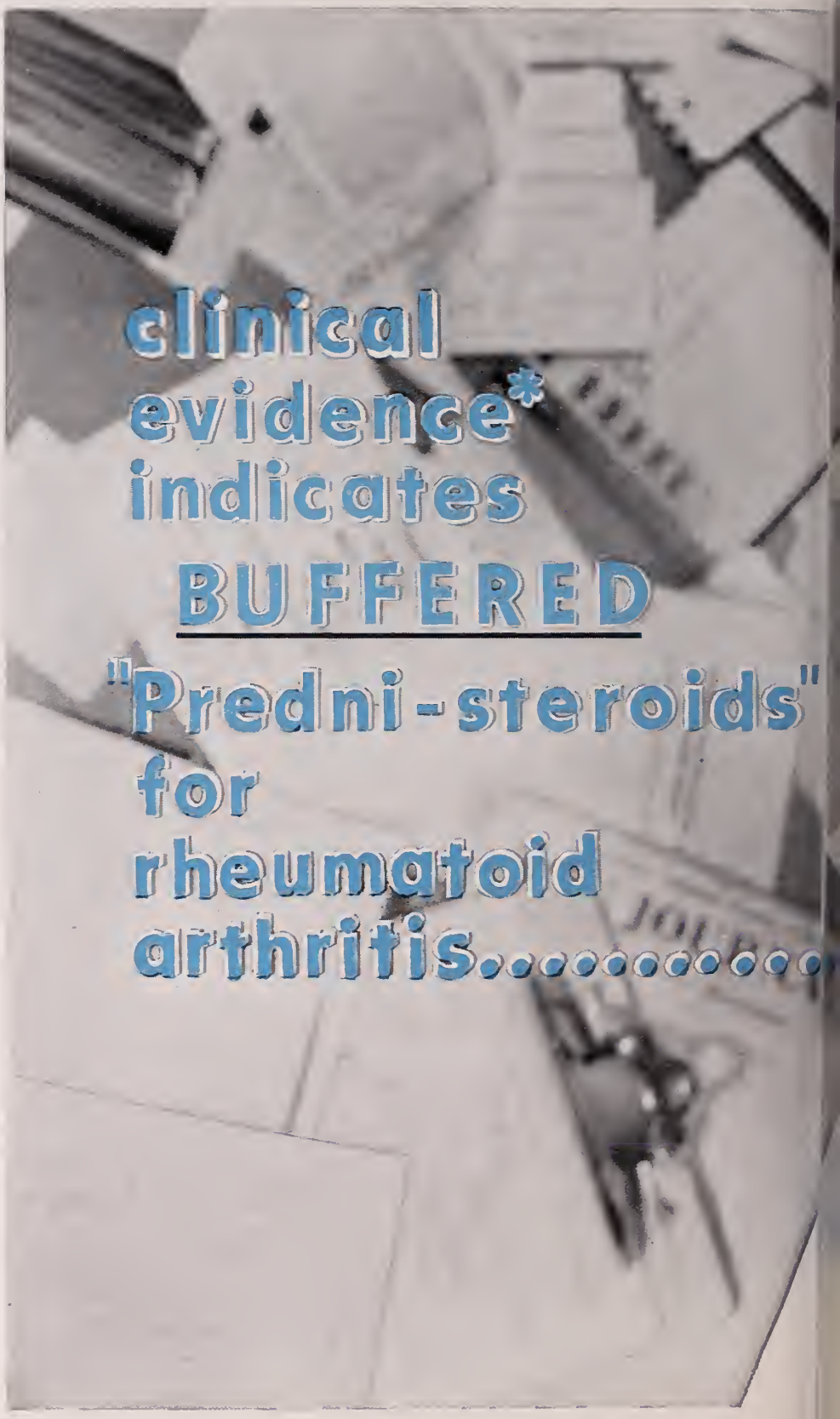
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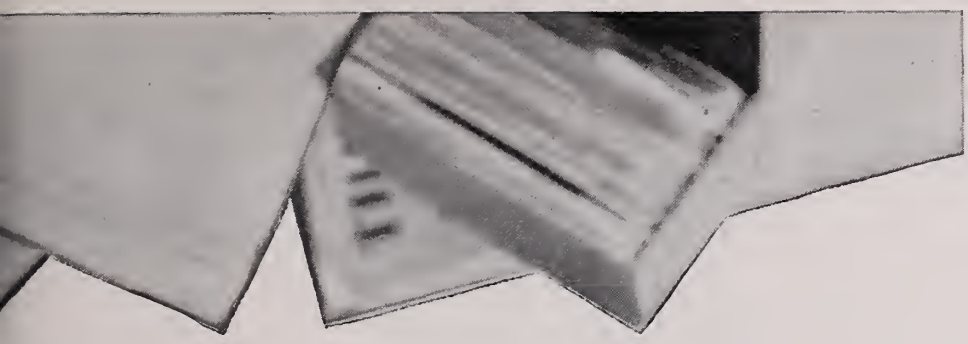
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1. Grossmann, E. E., and Lehman, R. H.: Am. J. Ophth. 42:121, 1956.

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*"It is our growing conviction that all patients receiving oral steroids should take each dose after food or with adequate buffering with aluminum or magnesium hydroxide preparations."—Sigler, J. W. and Ensign, D. C.: J. Kentucky State M. A. 54:771 (Sept.) 1956.

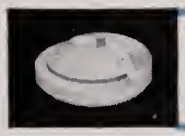
*"The apparent high incidence of this serious [gastric] side effect in patients receiving prednisone or prednisolone suggests the advisability of routine co-administration of an aluminum hydroxide gel."—Bollet, A. J. and Bunim, J. J.: J. A. M. A. 158:459 (June 11) 1955.

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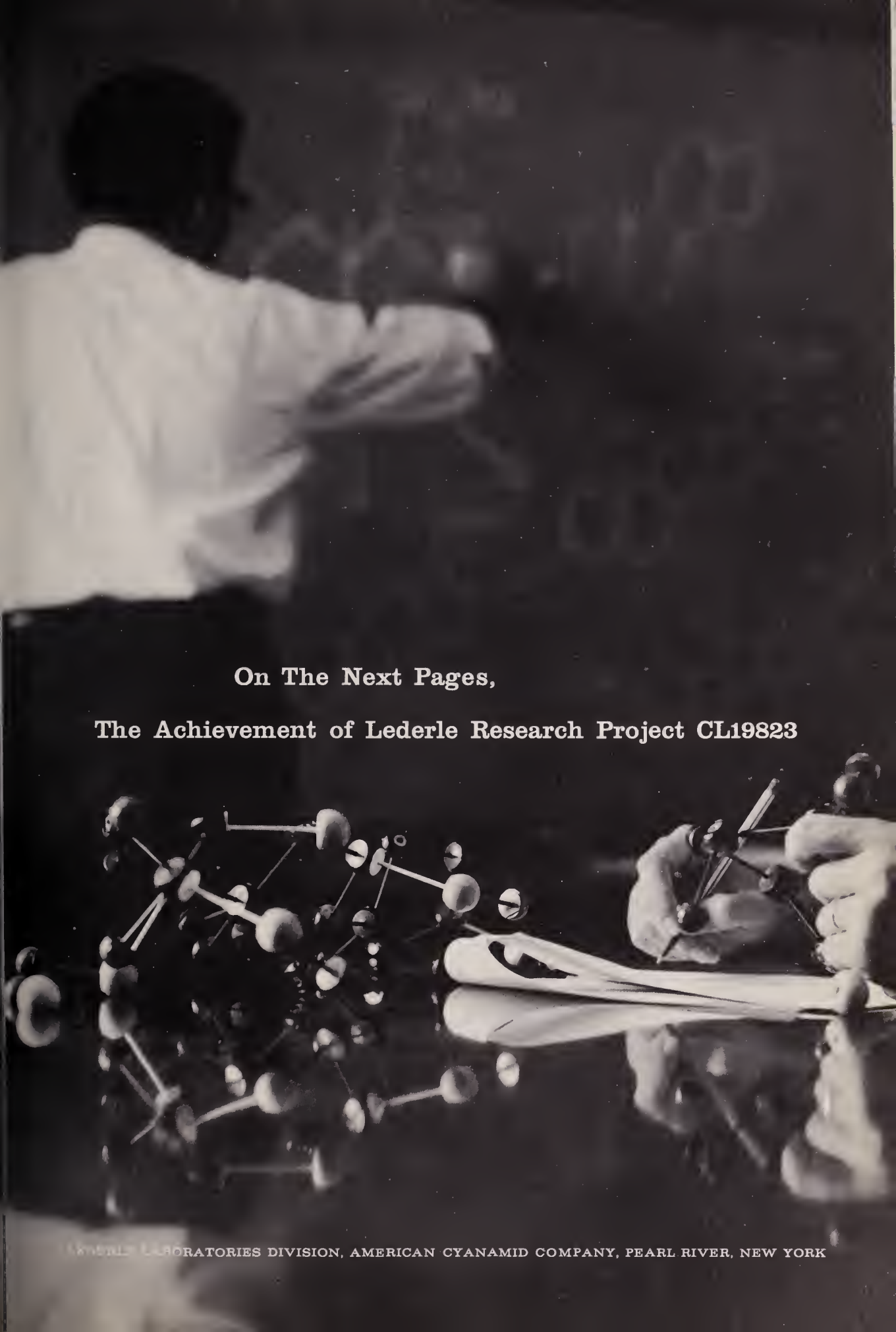
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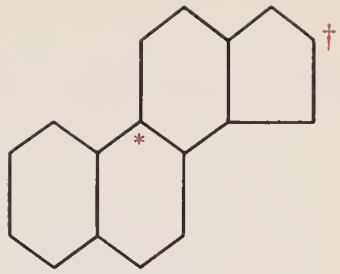
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- **a new high** in anti-inflammatory effects with lower dosage (averages 1/3 less than prednisone)
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  - No sodium or water retention
  - No potassium loss
  - No interference with psychic equilibrium
  - Low incidence of peptic ulcer and osteoporosis

Biological Effects of Aristocort

with particular emphasis on:

Kidney function

Animal studies on ARISTOCORT[1] have not demonstrated any interference with creatinine or urea clearance. Autopsy surveys of organs of animals on prolonged study of this medication have shown no renal damage.

Sodium and water

ARISTOCORT produced an increase of 230 per cent of water diuresis and 145 per cent sodium excretion when compared to control animals.[1] Metabolic balance studies in man revealed an average negative sodium balance of 0.8 Gm. per day throughout a 12-day period on a dosage of 30 mg. per day.[2] Additional balance studies showed actual sodium loss when ARISTOCORT was given in doses of 12 mg. daily.[3] Other investigators observed significant losses of sodium and water during balance studies and that those patients with edema from some older corticosteroids lost it when transferred to ARISTOCORT.[4,5] In two studies of various rheumatic disorders (194 cases) on prolonged treatment, sodium and water retention was not observed in a single case.[6,7]

Potassium and chlorides

There was no active excretion of potassium or chloride ions in animals given maintenance doses of ARISTOCORT 25 times that found to be clinically effective.[1] Potassium balance studies in humans[2,3] revealed that negative balance did not occur even with doses somewhat higher than those employed for prolonged therapy in rheumatoid arthritis. Hypokalemia, hyperkalemia or hypochloremia did not occur, when tested, in 194 patients with rheumatoid arthritis treated for up to ten and one-half months.[6,7]

Calcium and phosphorus

Phosphate excretion in animals[1] was not changed from normal even with amounts 25 times greater (by body weight) than those known to be clinically effective. Human metabolic balance studies[3] demonstrated that no change in calcium excretion occurred on dosages usually employed clinically when the compound is administered for its anti-inflammatory effect. Even at a dosage level twice this, slight negative balance appeared only during a short period.

Protein and nitrogen balance

Positive nitrogen balance was maintained during a human metabolic study on maintenance dosage of 12 mg. per day.[3] At dosages two to three times normal levels, positive balance was maintained except for occasional short periods in metabolic studies of several weeks' duration.[2,3]

There was always a tendency for normalization of the A/G ratio and elevation of blood albumin when ARISTOCORT was used in treating the nephrotic syndrome.[8]



Liver glycogen deposition and inflammatory processes

An intimate correlation exists between the ability of a corticosteroid to cause deposition of glycogen in the liver and its capacity to ameliorate inflammatory processes.

In animal liver glycogen studies, relative potencies of ARISTOCORT over cortisone of up to 40 to 1 have been observed. Compared to ARISTOCORT, five to 12 times the amount of prednisone is required to produce varying but equal amounts of glycogen deposition in the liver.[1]

Most patients show normal fasting blood sugars on ARISTOCORT. Diabetic patients on ARISTOCORT may require increased insulin dosage, and occasional latent diabetics may develop the overt disease.

Anti-inflammatory potency of ARISTOCORT was determined by both the asbestos pellet[1] and cottonball[9] tests. It was found to be nine to 10 times more effective than hydrocortisone in this respect.

Gastric acidity and pepsin

The precise mode of ulcerogenesis during treatment with corticosteroids is not known. There is much experimental evidence for believing this may be related to the tendency of these agents to increase gastric pepsin and acidity—and this cannot be abolished by vagotomy, anticholinergic drugs or gastric antral resection.[10] Clinical studies[11] of patients on ARISTOCORT revealed that uropepsin excretion is not elevated. Further, their basal acidity and gastric response to histamine stimulation were within normal limits.

Central nervous system

The tendency of corticosteroids to produce euphoria, nervousness, mental instability, occasional convulsions and psychosis is well known.[12] The mechanism underlying these disturbances is not well understood.

ARISTOCORT, on the contrary, does not produce a false sense of well being, insomnia or tension except in rare instances. In the treatment of 824 patients, for up to one year, not a single case of psychosis has been produced. In general, it appears to maintain psychic equilibrium without producing cerebral stimulation or depression.

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The Promise of Aristocort in Reduction of Side Effects

It is axiomatic to affirm that the undesirable collateral hormone effects of corticosteroids increase in frequency and severity the higher the dosage and the longer used.

It has also become well recognized that the most serious of the major side effects from long-term corticosteroid treatment are peptic ulcers, osteoporosis with fracture, drug psychosis and euphoria, and sodium and water retention leading often to general tissue edema and hypertension.

It is significant that of the close to 400 patients on the lower dosage schedules found effective in bronchial asthma and dermatologic conditions, only 1 case of peptic ulceration has developed. No other of the above side effects have been observed even though ARISTOCORT was administered continuously to them for periods as long as one year.

The treatment of rheumatoid arthritis with steroids appears to result in the highest incidence of side effects. For this reason, the side effects associated with ARISTOCORT therapy in 292 patients with rheumatoid arthritis are reported below.

Peptic Ulcer

The occurrence of peptic ulcer in 292 patients with rheumatoid arthritis treated continuously for up to one year with ARISTOCORT is approximately 1 per cent (2 of the 3 occurred in patients transferred from prednisone). In the remaining 532 cases recently analyzed, only one ulcer has been discovered in a patient who apparently had no ulcer when he was changed from another steroid.

Osteoporosis and Compression Fractures

The occurrence of osteoporosis with compression fracture in 292 patients with rheumatoid arthritis treated continuously for up to one year with ARISTOCORT is 0.33 per cent (1 case[1]). Although these results are encouraging, determination of the true incidence of osteoporosis will have to await the passage of more time.

Euphoria and Psychosis

The euphoria so commonly produced by all previous corticosteroids has seemed a most desirable attribute to patients. In penalty, however, they have often later to pay for this by mental disturbances, varying from mild and transitory to severe depression and psychosis,[2] and toxic syndromes producing even convulsions and death.[3]

Since the onset of these complications is not directly related to duration of steroid administration,[4] the fact that not one case of psychosis occurred in 824 patients treated with ARISTOCORT, is most encouraging.

Sodium Retention—Hypertension-Potassium Depletion

When 17 patients were changed from prednisone to ARISTOCORT, 11 rapidly lost weight although only one had had visible edema.[5] Sodium and water retention, hypokalemia or hyperkalemia and steroid hypertension did not appear in 194 rheumatoid arthritis patients treated with ARISTOCORT.[1,6]

The interrelation between blood and body sodium, and steroid hypertension has long been generally appreciated.[7,8] Except in rare instances, or when unusually high doses are used (e.g., leukemia), the problem of edema and hypertension caused by sodium and water retention, has been eliminated with ARISTOCORT.

Minor Side Effects

Collateral hormonal effects of less serious consequence occurred with approximately the same frequency as with the older corticosteroids.[1] These include erythema, easy bruising, acne, hypertrichosis, hot flashes and vertigo. Several investigators have reported symptoms not previously described as occurring with corticosteroid therapy, e.g., headaches, lightheadedness, tiredness, sleepiness and occasional weakness.

Moon facies and buffalo humping have been seen in some patients on ARISTOCORT. However, ARISTOCORT therapy, in many instances, resulted in diminution of "Cushingoid" signs induced by prior therapy. Where this occurs, it may be related to reduced dosage on which patients can be maintained.

Reduction of dosage by one-third to one-half

In a double-blind study of comparative dosage in patients with rheumatoid arthritis,[9] 70 per cent of the cases were as well controlled on a dose of ARISTOCORT one-half that of prednisone. A general recommendation can be made that ARISTOCORT be used in doses two-thirds that of prednisone or prednisolone in the treatment of rheumatoid arthritis. There are individual variations, however, and each patient should be carefully titrated to produce the desired amount of disease suppression.

Comparative studies, of patients changed from prednisone, indicate reduced dosage of ARISTOCORT in bronchial asthma and allergic rhinitis (33 per cent),[5] and in inflammatory and allergic skin diseases (33-50 per cent).[10,11]

General Precautions and Contraindications

Administration of ARISTOCORT has resulted in lower incidence of major serious side effects, and in fewer of the troublesome minor side effects known to occur with all previously available corticosteroids. However, since it is a highly potent glucocorticoid, with profound metabolic effects, all traditional contraindications to corticosteroid therapy should be observed.

No precautions are necessary in regard to dietary restriction of sodium or supplementation with potassium.

Since ARISTOCORT has less of the traditional side effects, the appearance of sodium and water retention, potassium depletion, or steroid hypertension cannot be used as signs of overdosage. As a rule patients will lose some weight during the first few days of treatment as a result of urinary output, but then the weight levels off.

Patients do not develop the abnormally voracious appetite common to previous corticosteroid administration. In fact, some patients experienced anorexia, and it is advisable to inform patients of this and to recommend they maintain a normal intake of food, with emphasis on liberal protein intake.

While precipitation of diabetes, peptic ulcer, osteoporosis, and psychosis can be expected to appear rarely from ARISTOCORT, they must be searched for periodically in patients on long-term steroid therapy.

Traditional precautions should be observed in gradually discontinuing therapy, in meeting the increased stress of operation, injury and shock, and in the development of intercurrent infection.

There is one overriding principle to be observed in the treatment of any disease with ARISTOCORT. *The amount of the drug used should be carefully titrated to find the smallest possible dose which will suppress symptoms.*

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Lederle

The Promise of Aristocort in Rheumatoid Arthritis

◊ ARISTOCORT *therapy has been intensely and extensively studied for periods up to one year on 292 patients with rheumatoid arthritis.*

Significant is the fact that most patients were *severe* arthritics, transferred to ARISTOCORT from other corticosteroids because satisfactory remission had not been attained, or because the seriousness of collateral hormonal effects had made discontinuance desirable.

Results of treatment

Freyberg and associates[1] treated 89 patients with rheumatoid arthritis (A. R. A. Class II or III and Stage II or III). Of these, 51 were on ARISTOCORT therapy from three to over 10 months. In all but a few patients, satisfactory suppression of rheumatoid activity was obtained with 10 mg. per day. Thirteen were controlled on 6 mg. or less a day, and for periods to 180 days. The investigators reported therapeutic effect in most cases to be A. R. A. Grade II (impressive) and that marked reduction in sedimentation rates occurred.

Another interesting observation in this study: Of the 89 patients treated, 12 had active ulcers, developed from prior steroid therapy. *In six patients, the ulcers healed while on doses of* ARISTOCORT *sufficient to control arthritic symptoms.*

Hartung[2] treated 67 cases of rheumatoid arthritis for up to 10 months. He found the optimum maintenance dose to be 11 mg. per day. Nineteen of these patients were treated for six to 10 months with an "excellent" therapeutic response.

Dosage and course of therapy

The initial dosage range recommended is 14 to 20 mg. per day—depending on the severity and acuteness of signs and symptoms. Dosage is divided into four parts and given with meals and at bedtime. Anti-rheumatic effect may be evident as early as eight hours, and full response often obtained within 24 hours. This dosage schedule should be continued for two or three days, or until all acute manifestations of the disease have subsided, whichever is later.

The maintenance level is arrived at by reduction of the total daily dosage in decrements of 2 mg. every three days. The range of maintenance therapy has been found to be from 2 mg. to 15 mg. per day—with only a very occasional patient requiring as much as 20 mg. per day. Patients requiring more than this should not be long continued on steroid therapy.

The aim of corticosteroid therapy in rheumatoid arthritis is to suppress the disease only to the stage which will enable the patient to carry out the required activities of normal living or to obtain reasonable comfort. The maintenance dose of ARISTOCORT to achieve this end is arrived at while making full use of all other established methods of controlling the disease.

ARISTOCORT is available in 2 mg. scored tablets (pink); 4 mg. scored tablets (white). Bottles of 30.

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1. Freyberg, R. H., Berntsen, C. A., and Hellman, L.: Paper presented at International Congress on Rheumatic Diseases, Toronto, June 25, 1957. 2. Hartung, E. F.: Paper presented at Florida Academy of General Practice, St. Petersburg, Florida, Nov. 2, 1957.

Lederle

The Promise of Aristocort in Respiratory Allergies

About 200 patients with respiratory allergies have been treated with ARISTOCORT *for continuous periods up to eight months.*

Results of treatment

Sherwood and Cooke[1,2] gave ARISTOCORT to 42 patients with bronchial asthma and allergic rhinitis. Average dose needed to control the asthmatic group was approximately 6 mg. per day (range, 2 to 14 mg.). Results, which were called "good to excellent" in all but four, were achieved on one-third less than similarly effective doses of prednisone or prednisolone.

The investigators noted other major improvements in ARISTOCORT therapy over the older steroids. There was no increase in blood pressure in any patient: *on the contrary, in 12 patients, there was reduction of pressure when they were transferred to* ARISTOCORT. One patient had required auxiliary antihypertensive drug therapy; over a nine-week period on ARISTOCORT, the pressure gradually fell from 206/100 to 136/79. In another case, the pressure slowly dropped from 205/105 to 154/86.

The number of cases in which these investigators tried ARISTOCORT in allergic rhinitis was not large enough to provide significant averages. However, the range of effective therapy was from 2 to 6 mg. per day. These strikingly low daily doses resulted in control of all signs and symptoms.

Schwartz[3] treated 30 patients with chronic, intractable bronchial asthma. At an average daily dose of 7 mg., he reported "good to excellent" results in all but one. Spies,[4] Barach[5] and Segal,[6] reported similar results at average daily maintenance doses of 4 to 10 mg. of ARISTOCORT.

Dosage and course of therapy

The initial dosage range recommended is 8 to 14 mg. of ARISTOCORT daily. Although a rare, very severe case may require more than this on the first day of therapy, these dosages will usually result in prompt alleviation of dyspnea, wheezing and cyanosis. Patients are soon able to carry out a normal span of daily activity.

The maintenance level is arrived at by reduction of the total daily dose every three days in decrements of 2 mg.; in the over-all series, the average daily dose for bronchial asthma is approximately 8 to 10 mg. and for allergic rhinitis, 2 to 6 mg. per day. All total daily doses should be divided into four parts and given with meals and at bedtime. As in every condition where corticosteroids are employed, each patient's treatment should be individualized and the maintenance arrived at by careful titration against signs and symptoms of disease.

Patients with chronic bronchial asthma may require steroid therapy for several months. And since asthma may be associated with cardiac disease, especially in the older age groups, ARISTOCORT is particularly useful because of its ability to cause excretion of sodium and water.

ARISTOCORT is available in 2 mg. scored tablets (pink); 4 mg. scored tablets (white). Bottles of 30.

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1. Sherwood, H., and Cooke, R. A.: J. Allergy 28:97, 1957. 2. Sherwood, H., and Cooke, R. A.: Personal Communication. 3. Schwartz, E.: Personal Communication. 4. Spies, T. D.: Personal Communication. 5. Barach, A. L.: Personal Communication. 6. Segal, M. S.: Personal Communication.

Lederle

The Promise of Aristocort

in Nephrotic Syndrome

◊ *Fourteen patients with the nephrotic syndrome have been treated with* ARISTOCORT *for continuous periods of up to six weeks.*

Results of treatment

Hellman and associates[1,2] noted that ARISTOCORT, because of its favorable electrolyte effects, may well be the most desirable steroid to date in treatment of the nephrotic syndrome. However, thus far its use has been reported in only 14 children, of whom 8 had a complete diuresis and disappearance of all abnormal chemical findings. Four of the patients had diuresis, but continued to show some abnormal chemical findings, while two patients with signs of chronic renal disease failed to respond.

Dosage and course of therapy

In order to produce maximal response, 20 mg. should be given daily until diuresis occurs. The dose should then be decreased gradually and maintained around 10 mg. a day. After the patient has been in remission for some time, it may be advisable to diminish the dose gradually and discontinue ARISTOCORT.

in Pulmonary Emphysema and Fibrosis

◊ *Eleven patients with pulmonary emphysema and/or fibrosis were treated with* ARISTOCORT *for continuous periods of over two months.*

Results of treatment

Only small series of cases observed by Barach,[3] Segal,[4] and Cooke,[5] are available. Barach treated patients who were not adequately controlled by prednisone, with the same dose of ARISTOCORT with significant improvement.

Dosage and course of therapy

The initial suppressive dose range recommended is 10-14 mg. daily. Frequently, there is a prompt decrease in cyanosis and dyspnea, with increase in vital capacity.

The average maintenance dose level was 8 mg. a day. If it is desired to maintain a patient on continuous therapy for some months, dosages as low as 2 mg. a day have been successful. All decreases in dosage should be gradual and at a rate of 2 mg. decrements in total daily amount, every two to four days. The daily dosage is divided into four parts and given with meals and at bedtime.



in Neoplastic Diseases

◊ *Forty-four children and adults have been given* ARISTOCORT *for palliative treatment of acute leukemia, chronic lymphatic leukemia, lymphosarcoma, lympholeukosarcoma and Hodgkin's disease.*

Results of treatment

Farber[6] has treated 22 children with acute leukemia for an average of three weeks. Of the 17 observed long enough to judge the efficacy of the medication, he rated five as excellent, three as good, two as fair and seven as poor responses.

Hellman and associates[7] gave ARISTOCORT to a group of patients with the various lymphomas in doses of 40 to 50 mg. a day—occasionally up to 100 milligrams. Treatment was continued in some cases for 17 weeks. Response was classified as good for the palliative purposes for which the drug was given.

Dosage and course of therapy

Massive initial suppressive doses of 40 to 50 mg. per day in children (1 mg./kg./day) and up to 100 mg. a day in adults have been administered.

Responses to any specific dosage in these conditions vary so widely that only a general dosage range can be indicated. Treatment must be individualized; rate of reduction in dosage and determination of maintenance levels cannot be categorized.

Miscellaneous

Patients with various other diseases have been treated by several clinical investigators. These include patients with osteoarthritis, acute bursitis, rheumatic fever, spondylitis, other "collagen-vascular" diseases (dermatomyositis, etc.), thrombocytopenic purpura, chronic eosinophilia, hemolytic anemia, diuretic-resistant congestive heart failures, and adrenogenital syndrome.

There have not been sufficient patients in any of the above categories to permit definitive treatment schedules to be finally established for ARISTOCORT. Additional studies are now in progress and physicians desiring information on any of these diseases are requested to write to Lederle Laboratories, Pearl River, New York for available data.

ARISTOCORT is available in 2 mg. scored tablets (pink); 4 mg. scored tablets (white). Bottles of 30.

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Results of treatment

Rein and associates[1] treated 26 patients with severe dermatitis. Twenty-four had been on prednisone when changed to ARISTOCORT. While some had found satisfactory symptomatic relief, others had also developed side effects—moon face, buffalo hump, increased appetite with excessive weight increases and gastro-intestinal disturbances.

These investigators determined the equivalent dosage of ARISTOCORT to be approximately two-thirds that required to control symptoms on the previous corticosteroid. Thirteen of the 26, who had developed moon face, noted either an actual decrease or no further increase when transferred to ARISTOCORT. In addition: *Voracious appetites disappeared, with loss of weight in 11 patients; there was no elevation in blood pressure, and no necessity to restrict sodium or administer supplemental potassium.* Sherwood and Cooke,[2] and Shelley and Pillsbury[3] obtained similar results in allied disorders.

Hollander[4] first observed that ARISTOCORT appears to have striking affinity for the skin and great activity in controlling such diseases as psoriasis, for which other corticosteroids have been indifferently effective. Shelley and Pillsbury,[3] in 50 cases of acute extending psoriasis found that over 60 per cent were markedly improved.

Dosage and course of therapy

The recommended initial suppressive dose range is 14 to 20 mg. per day. In very severe cases, temporary dosages up to 32 mg. a day have been successfully employed. Once lesions are suppressed, gradually reduce dose to the maintenance level—which may be as low as 2 mg. per day.

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in Disseminated Lupus Erythematosus

◇ *Forty patients with disseminated lupus erythematosus were treated with* ARISTOCORT *for continuous periods of up to nine months.*

Results of treatment

Patients have responded very promisingly to therapy. Dubois[1] has had the largest single experience (28 cases) with ARISTOCORT in the treatment of this disease. He reported 25 of the 28 responded favorably.

Freyberg,[2] Hartung,[3] Hollander,[4] Spies,[5] and Segal,[6] each in smaller series of cases, reported similarly good therapeutic responses.

Dosage and course of therapy

The initial suppressive dose recommended is 20-30 mg. daily. Once the desired effect is achieved, the dose should be reduced gradually to maintenance levels (3 to 18 mg. per day).

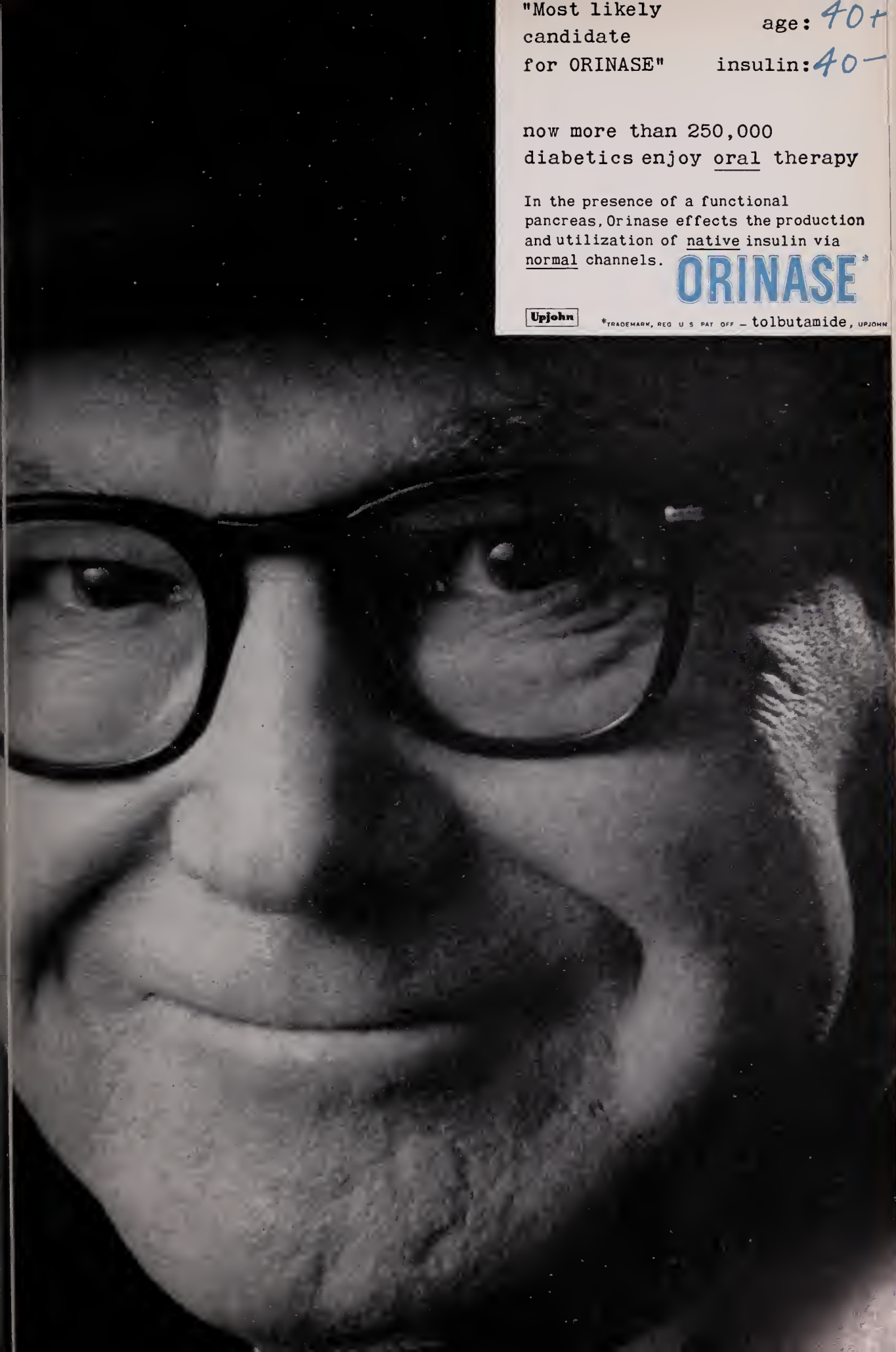
In severely ill patients large doses may be required for several days in order to preserve life. Even on these large doses, edema and sodium retention have not occurred.

ARISTOCORT is available in 2 mg. scored tablets (pink); 4 mg. scored tablets (white). Bottles of 30.

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- **Relatively free of adverse side effects.**[1,2,3,6]
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CONDITION
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STUDY 2[2] Herniated disc Ligamentous strains Torticollis Whiplash injury Contusions, fractures, and muscle soreness due to accidents
STUDY 3[5] Herniated disc Acute fibromyositis Torticollis
STUDY 4[6] Pyramidal tract and acute myalgic disorders
TOTALS



E SKELETAL MUSCLE SPASM[1,2,5,6]

	RESPONSE		
	moderate	slight	none
ed"			
2	6	1	—
ced"			
2	13	—	1
	4	—	—
	—	—	—
	1	—	—
	2	—	—
nt"			
	2	—	—
	—	—	—
	—	1	—
nt"			
2	—	2	1
0.	28	4	2
5...)	(20.3%)		

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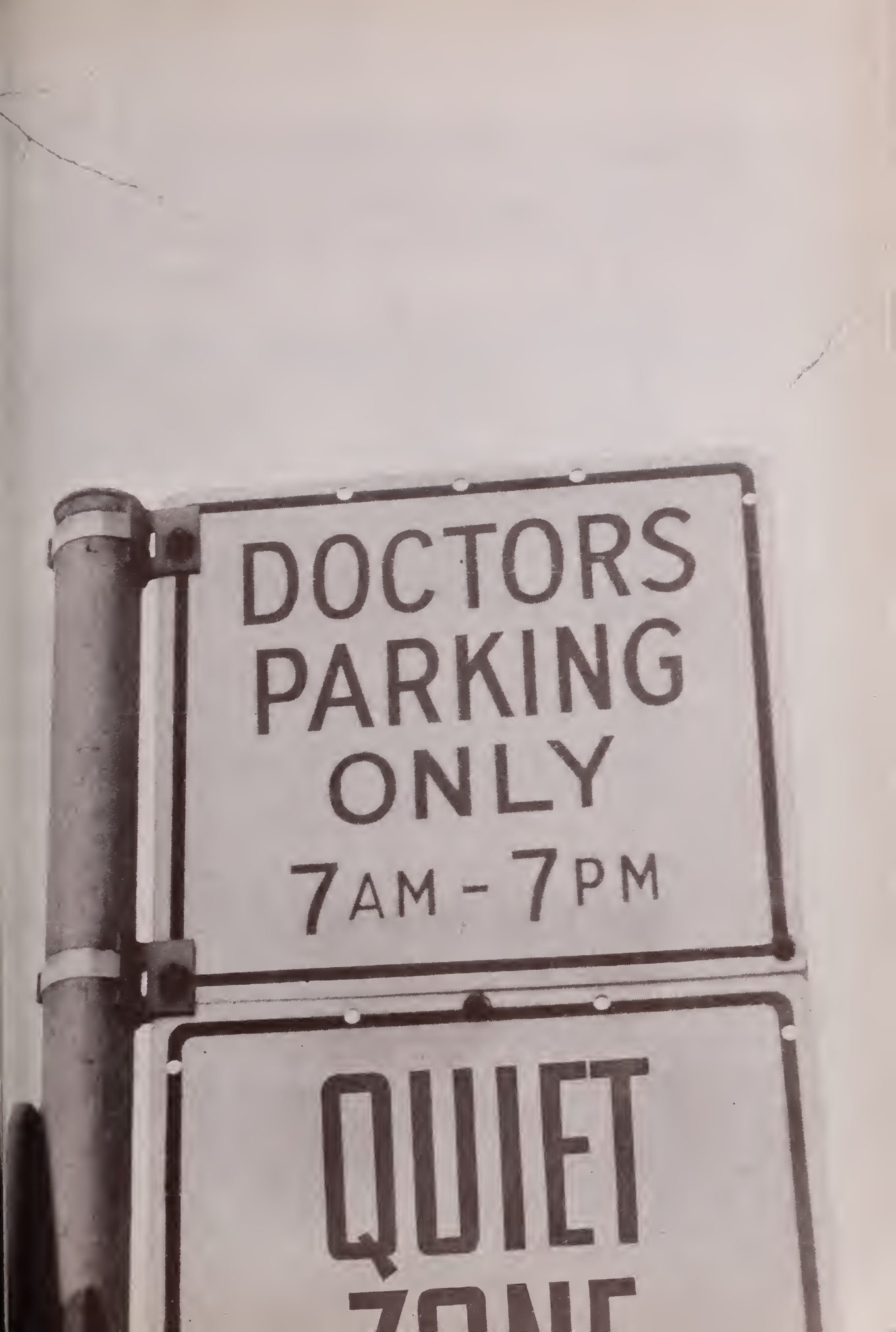
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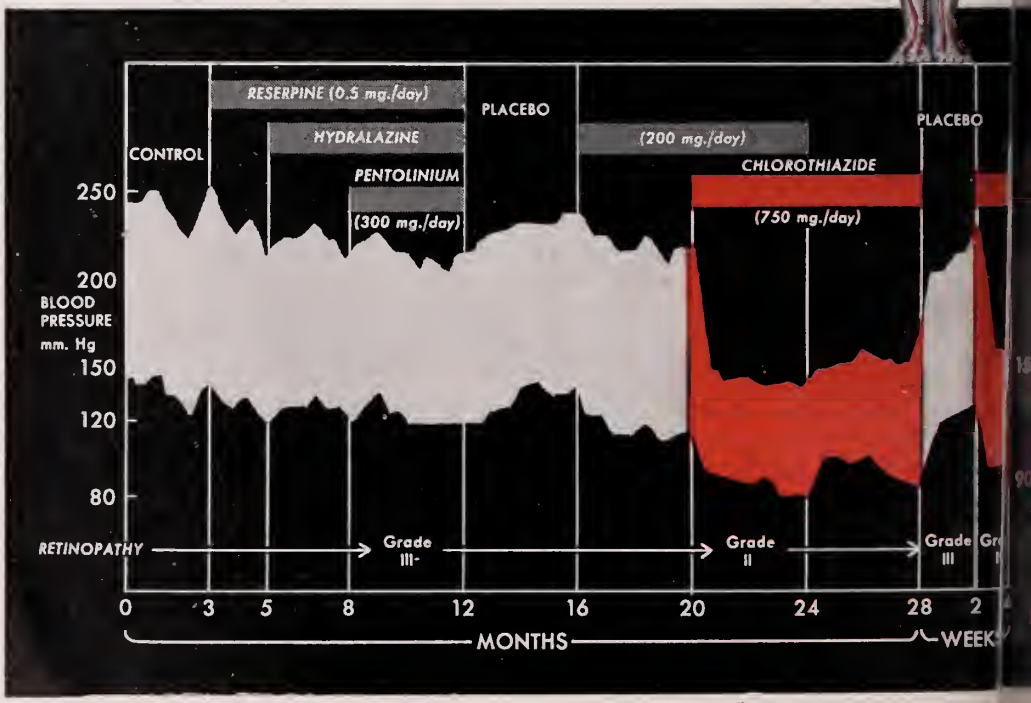
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Freis, E. D., Wanko, A., Wilson, I. H. and Parrish, A. E.: J.A.M.A. 166:137, Jan. 11, 1958.

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In "Chlorothiazide: A New Type of Drug for the Treatment of Arterial Hypertension," Hollander, W. and Wilkins, R. W.: Boston Med. Quart. 8: 1, Septemt 1957.

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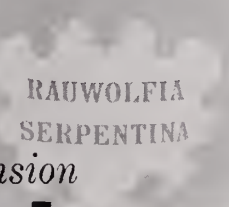
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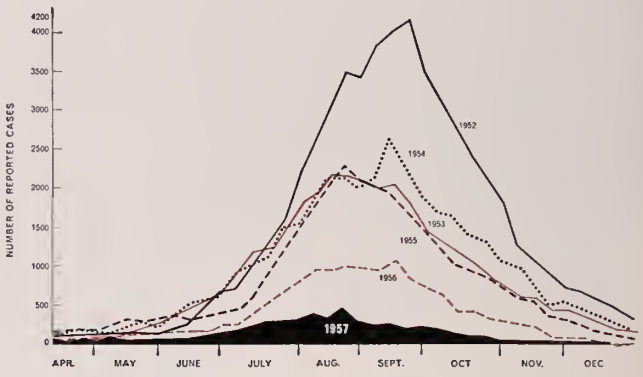
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1. J. A. M. A., 165:21 (November 23), 1957.
2. Department of Health, Education, and Welfare: News Release, October 10, 1957.



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The Virginia
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MONTHLY

June, 1958
Vol. 85, No. 6
Whole No. 1273

Guest Editorial . . .

Overtreatment of The Patient Hopelessly Ill

WHEN WILLIAM OSLER wrote of pneumonia as the "friend of the aged", he embraced a moral philosophy which has far outlived the therapeutic nihilism of his day and one which may profitably be re-examined in this age of "miracle drugs" and high hospital costs.

Several of the factors which combine against the best interests of the hopelessly ill patient are the antibiotics, cortisone and the other anti-inflammatory agents, the indiscriminate use of blood transfusions and parenteral and tube feedings.

The physician who embraces watchful waiting has a need for moral courage in the face of the family's insistence that something be done. However, when the true outlook is explained to a responsible member of the family and the choice put up to him, full confidence is often warmly expressed in the physician's program. If there is any doubt as to this confidence or if the prognosis is the least in question, then written medical consultation should be obtained.

Life is indeed sacred but not sacrosanct to the point of inflicting costly and painful indignities on someone who has earned his repose. To unduly prolong the flickering flame would seem to be more Hindu than Christian. As a physician has said, "One is not prolonging life, but death."

Unfortunately, the patient is usually unable to express his own wishes. Death scenes are generally free from fear. This is so often documented in the biographies of such men as General T. J. Jackson. One reason for this, as every physician knows, is that there is an analgesia which begins in the stage of confusion and progresses through the stages of stupor and finally coma. This is generally associated with some euphoria in which fear is left behind. To revive the patient in order that he again retread this dreary path seems to be quixotical if not unkind. Alvarez[1] has recently written a pertinent editorial on this subject.

Although families may insist, at the time, on everything possible being done, eventually, they are not grateful for the prolongation of their vigil. Certainly those who have mortgaged their financial future may be stridently and rightfully offended.[2]

It should go without saying that the existence of hospitalization insurance for these unfortunates should not influence their management. My own feeling is that most patients in this category are much better satisfied at home, and unless there are special factors involved, they should be managed there with the aid of intelligent relatives and attendants. This is admittedly harder on the physician but by proper indoctrination of the family, mutual understanding and co-operation may be obtained.

This discussion does not include early hopeless cases but only those late cases which are kept in vegetative existence by artificial means. The writer has seen competent and conscientious physicians preserve life for weeks and months, in cases with stupor and even coma, patients who would have quietly expired in a day or so if left mercifully alone. As an extreme example, I once saw dying prolonged by tracheal insufflation for over eighteen hours after brain surgery for hopeless glioma with destruction of the respiratory centers. In this case, only the relatives and the hapless anesthetist suffered.

Exceptions should be recognized, of course. But, in the great majority of cases of this type, if the physician is in conscientious attendance and control over the case, is sure his patient is free of pain and thirst and has good nursing care, then he, the physician, should recognize nature's wisdom. He should not prescribe blood and undue parenteral or tube feedings, and at the end should have the courage to discontinue antibiotics, if these are an unduly prolonging factor.

Restraints should be avoided if at all possible on delirious or comatose patients. Finally, although these patients may feel cold and clammy and the body temperature may be normal or below, they often suffer with heat and should not be overly bundled in blankets unless they are clearly needed.

For authority one can go no higher than to the Golden Rule. If he wishes to go back another four hundred years, he can read from the Hippocratic Oath:

> "I will follow that method of treatment which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous."

MARTIN DONELSON, JR., M.D.

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Serum Calcium and Inorganic Phosphate in Children

Following the Administration of a Buffered Phosphate Solution

WILLIAM G. WAY, M.D.
Winchester, Virginia
JOHN D. FRENCH, M.D.
Martinsville, Virginia
JOHN C. FORBES, M.D.
LEE E. SUTTON, Jr., M.D.
Richmond, Virginia

ALTHOUGH a buffered phosphate solution has been used successfully as an enema in adults for a number of years no data, as far as we are aware, is available regarding its safety in children, especially in small children. Since there are many times when such an enema might be advantageously employed in children, a study along these lines seemed indicated. On account of the fact that the only possible danger from using such a buffered solution as an enema would seem to be excessive absorption, it was decided to determine if its use would cause a significant change in either the inorganic phosphate or calcium concentrations of the serum. Fifteen children were studied, varying in age from 6 months to 9 years. Eight of the 15 subjects had, within the 47 hours preceding the administration of the enema, what may be termed soft or non-constipating stools. The other 7 had what could be termed constipated stools and were suffering from constipation more or less. Blood samples were collected just before the administration of the enema, and 2 and 5 hours thereafter. The calcium and inorganic phosphate concentration was determined in each case. The enema fluid had a pH of 6 and contained 16 grams of sodium phosphate, monobasic, and 6 grams of sodium phosphate, dibasic per 100 c.c. of solution. As a general rule, children around 1 year of age received 30 c.c. of the solution, those around 3 years 45 c.c. and those around 5 years of age 60 c.c.

The results were quite good on the whole. Passage of the enema and fecal contents took place in 2 to 10 minutes in all but one case where it was retained for 50 minutes. This was a 3 year old child weighing 26½ lbs. who had not had a stool for 48 hours previously. He received 30 c.c. of the enema solution. He passed a hard stool with the enema. In the next 48 hours he passed a hard and soft stool. The poor results in this case was probably due to the small volume of solution employed. Satisfactory bowel movement was obtained from the enema in all other subjects. The analytical results are shown in Table 1. It will be seen that there was a slight but insignificant rise in both the calcium and inorganic phosphate following the enema administration. No untoward reaction was noted in any case.

TABLE 1

Determination	Concentration in mg. per 100 ml. of serum		
	Orig. serum	2 hr. after the enema	5 hr. after the enema
Calcium	12.6±.27*	13.3±.18	13.3±.35
Phosphate	5.5±.22	5.9±.16	5.6±.12

* Standard error.

Though the number of patients studied is not large the results clearly indicate that the buffered phosphate solution employed constitutes a safe and effective enema preparation for even small children.

The buffered phosphate solution contained in the Fleet Enema Disposable Unit was supplied by the C. B. Fleet Company, Lynchburg, Virginia.

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Trends In Cataract Surgery

With Special Reference to the Cataract with Chronic Simple Glaucoma

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EYE SURGERY is the most critical of all branches of surgical work. The dividing line between success and failure is often not more than a hair's breadth and the degree of coordination required between hand and eye is the highest order. Clearly such manual dexterity is not to be easily acquired by any and it is never acquired at all by some. Nevertheless, with diligence and experience, most surgeons develop sufficient skill to perform the operations of ophthalmic surgery with safety in most cases, and occasionally with brilliance. Some degree of ambidexterity is also a great asset and it should be sedulously cultivated. Although we can agree with Burnell Carter who remarks that those people never become ambidextrous who were born ambisinistrous. Twenty years ago Meniham laid down three of the most necessary attributes of the surgeon: "The Lady's Hand, The Lion's Heart and The Eagle's Eye". This is particularly true of ophthalmic surgery.

ANESTHESIA

It is assumed that the patient has had correct diagnosis and cataract surgery is indicated. Also, a complete history and physical examination including laboratory and bacteriological studies have been carried out.

Preliminary Anesthesia. The patient is admitted to the hospital 24 hours prior to the operation. The night before operation the patient is given mild sedation; Nembutal grs. 3/4 with Thorazine 25 mg. Thorazine 25 mg. is given the following morning at 9:00 and the same dose repeated at 1:00 P. M. Surgery is begun at 3:00 P.M. Thorazine is one of the outstanding advances in anesthesia. It potentiates the action of morphine, prevents postoperative nausea and vomiting, and has a quieting effect on patients of an emotional type. Many patients who heretofore became confused and uncontrollable are now easily managed with the use of Thorazine. The preliminary sedation in our clinic consists of Nembutal grs. ½, one hour prior to operation along with Thorazine. Every case is individualized and the above drugs are altered to fit the patients conditions. Sometimes less and sometimes more of the drug is given. It is always well to test the patients sensitivity to these drugs. We never employ general anesthesia or any type of intravenous anesthesia.

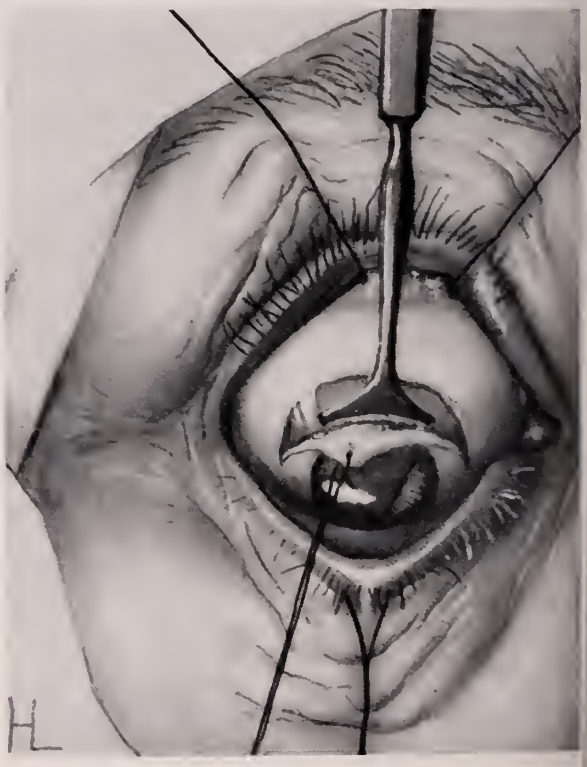


Figure 1

Topical anesthesia consists of one drop Cocaine 4% three minutes apart for four times. Careful attention is made to avoid any of the drug entering the nasal lacrimal duct. For injections to induce anesthesia akinesia, either Procaine Hydrochloride 2% or Xylocaine Hydrochloride 2% may be used. We prefer the Xylocaine as the anesthesia is longer and it minimizes the postoperative pain. Epinephrine Hydrocloride is added to this solution.

From the Department of Ophthalmology, Gill Memorial Eye, Ear and Throat Hospital, Roanoke, Virginia.

Read at the meeting of the Virginia Society of Opthalmology and Otolaryngology in Roanoke, December 7, 1957.

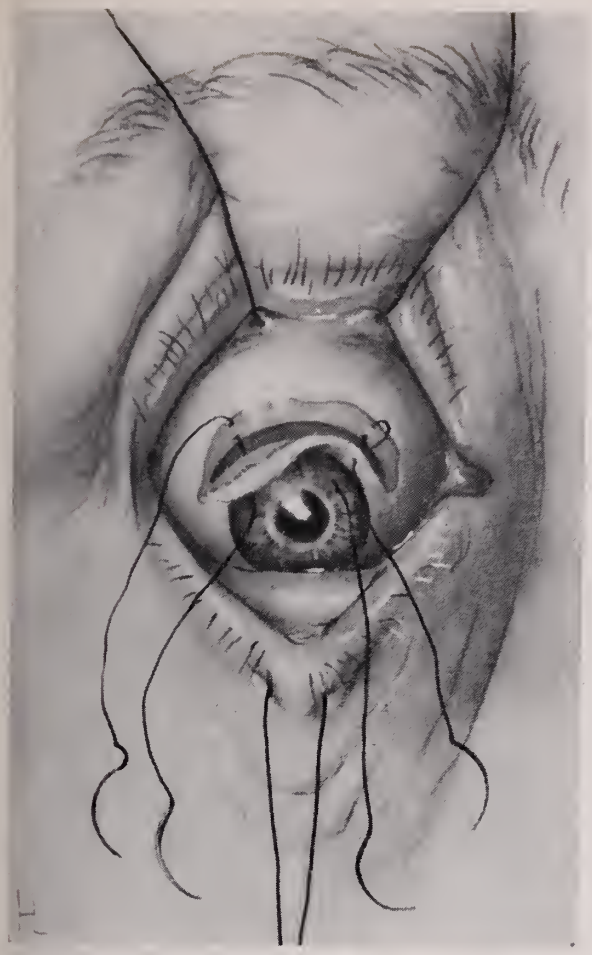


Figure 2

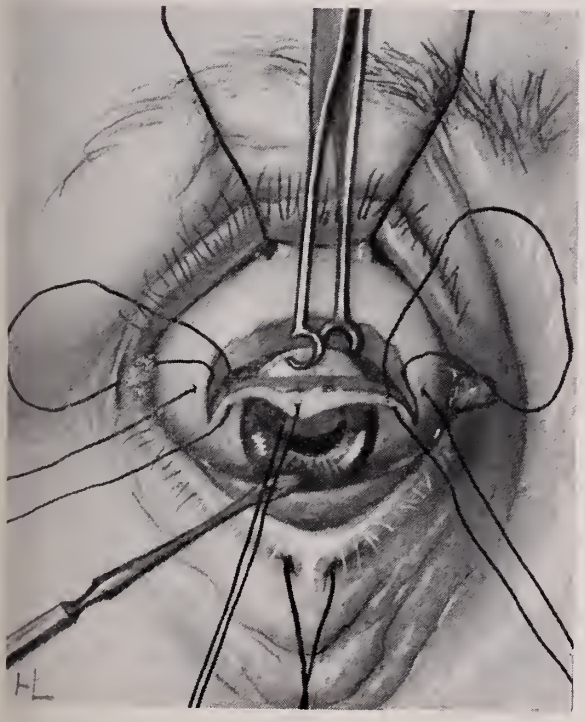


Figure 3

We formerly used Hyalurondise with this solution because it would cause greater diffusion and thus enhance the anesthesia akinesia. We now omit this drug as we feel that the diffusion lessens the effect of the anesthesia thereby causing the patient more pain. We employ the VanLint method, using the same strength solution to produce akinesia of the orbicularis muscle. Retrobulbar injection is used in most cases but it is not always necessary. When it is used, we take great care to see that the point of the needle is moving while the solution is being injected, to prevent hemorrhage. Some operators place great emphasis on gentle pressure upon the eye ball for two or three minutes following retrobulbar injection. In our hands we find it makes very little difference. After the above technique is followed, if the patient should have pain or be uncontrollable, we do not hesitate to give additional sedation on the table, usually Morphine grs.1/8 intravenously.

CONJUNCTIVAL FLAP

A conjunctival flap is made 3-4 mm in front of the limbus and a full 180 degrees. Too much emphasis cannot be laid upon the importance of a good, firm conjunctival flap which includes episcleral tissues as well.

In our hands, the use of the conjunctival flap is

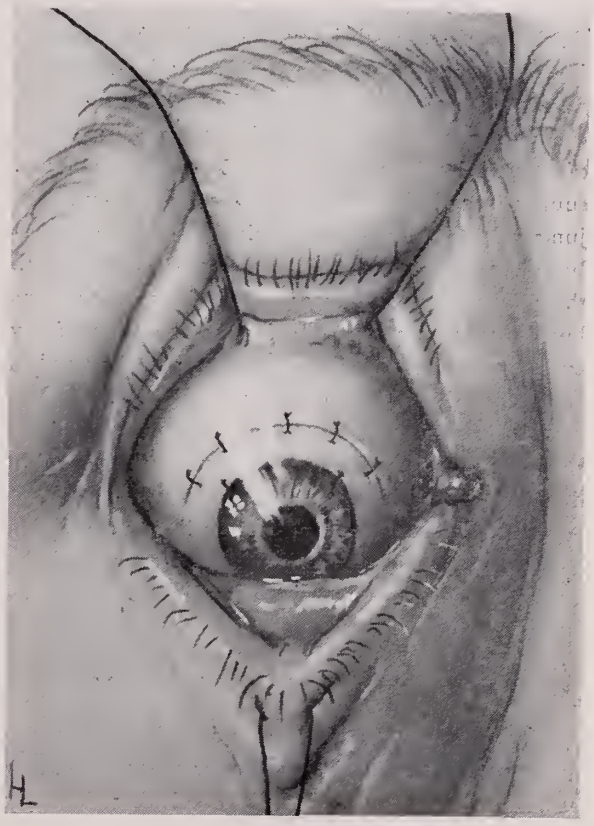


Figure 4

the greatest single factor in the prevention of epithelia downgrowth. Before making the incision, all bleeding is thoroughly under control and the field of operation is perfectly dry. The bleeding can be controlled by the use of Epinephrine or the vessel coagulated by the application of a heated Strabismus hook.

INCISION

A great deal has been written in recent years concerning the advisability of using a keratome incision or the knife incision. Formerly a person who used a keratome incision was considered a sissy and a clumsy operator. In more recent years the majority of surgeons have been converted to the keratome incision. A hollow ground keratome is used routinely in our clinic and the incision is enlarged with scissors, a full 180 degrees. One of the failures for the delivery of the cataract intracapsularly is due to the incision being too small.

WOUND CLOSURE

Many of you have witnessed the evolution of no sutures to conjunctival sutures and to corneoscleral sutures. Again the preponderance of evidence is in favor of corneoscleral sutures. We do not feel that the last word has been said in wound closure. Epithelia downgrowth in our hands has been a more frequent complication where corneoscleral sutures were used than with the conjunctival sutures. We made a study in recent years of 100 consecutive cases of corneoscleral sutures and 100 with conjunctival sutures and the complications were fewer with conjunctival sutures and the results as a whole were a little better. I realize this is not in accordance with the results obtained in some of the large institutions but I am giving you a leaf from the book of my own experience. We feel, when comparative studies are accurately made and reported, there will be less corneoscleral sutures than at the present time. Anytime you put a needle into the cornea you inevitably have a localized irritation and sometimes a localized abscess. Even in the hands of skilled surgeons we sometimes get a leaking wound as a result of the suture. We do not have this complication with conjunctival sutures.

ROUND PUPIL VS. IRIDECTOMY

The technique in cataract surgery has undergone many changes in the last fifteen or twenty years. A review of the literature will reveal that formerly ophthalmic surgeons would do a preliminary iridectomy prior to the cataract extraction thus making two procedures out of one. It took many years for the surgeons to abandon the two stage operation. After that there was a great deal of discussion and differences of opinion as to the advisability of doing a small iridectomy, a peripheral iridectomy or having a round pupil. By and large you will possibly have fewer complications when you perform a small iridectomy or an iridectomy of some type rather than a round pupil. If the pupil dilates readily a round pupil is always to be considered.

It has many advantages as well as some disadvantages. The principal advantage is that the round pupil does not hold back the vitreous, has a better cosmetic appearance and has less photophobia following surgery. One should always realize however, that a knife should never be thrust into a patients eye to give a surgeon a thrill or to give the patient a beauty treatment. What is best for the patient should always be done. A small iridectomy, at the present time, is probably the matter of choice for reasons mentioned. You do not have the possibility of a drawn up pupil and the prolapse of the iris is less likely to develop. One may argue that with the corneoscleral sutures the prolapsed iris is no longer to be considered, but every experienced operator knows that even under these conditions you do occasionally have a prolapse of the iris.

In our clinic, our cases are divided about 50-50, half having an iridectomy of some type and half having a round pupil with a peripheral iridotomy. With the round pupil we usually instill Esserine or Pilocarpine at the time of operation and after that we dilate the pupil. With an iridectoly we usually keep the pupil dilated. Experience has taught us that dilation of the pupil is a sound and safe procedure to follow in cataract surgery. It certainly has a tendency to prevent a shallow anterior chamber and in our hands less postoperative reaction.

EXTRA-CAPSULAR VS. INTRA-CAPSULAR EXTRACTION

Those of you who have been doing ophthalmic surgery for many years are familiar with the battle between the choice of extra capsular and of intra capsular cataract extractions. At the present time the preponderance of evidence is entirely in favor of the intra capsular extraction. We attempt it in all cases and, with careful technique, the operator being under complete control as well as the patient being under control, the employment of time and patience, the intra capsular extraction should be successful in at least 75% or more of cases.

The postoperative recovery is much smoother and the annoying complication of retained pupillary membrane necessitating discission is no longer to be considered.

SUTURE MATERIAL

We routinely use for our cataract surgery, 6-0 Chromic Gut. It is used both for the corneoscleral sutures and for closing the conjunctiva. It is a great comfort to the patient to know he does not have to have further surgery on his eyes. We formerly used silk sutures and the patient would spend a week to ten days looking forward, with mortal dread, to having the sutures removed. It is certainly a factor in the convalescence when the patient knows he does not have to return to the operation room for further surgery.

We find that the wound closes just as well with the cat gut as it does with the silk and the absorption period is usually ten to twelve days. We have not had a case of infection from cat gut sutures.

BANDAGING ONLY ONE EYE

It is only in recent years that surgeons have become convinced that bandaging one eye is not harmful to the patient. We all can remember the days when both eyes were bandaged, sometimes sand bags were put at each side of the head, the hands were tied down and kept in this position sometimes for a number of days. In spite of all the writings by various operators in recent years of the advisability of bandaging only one eye, we still occasionally see and hear of surgeons who keep the patients flat on their back for two weeks and bandage both eyes. This is a terrible shock to anyone, particularly a senile patient. It is nothing short of cruel and barbarous. Everytime anyone makes a distinct change in the orthodox technique he does it at the risk of being called radical. Advances in surgery are made only by those who are willing to develop an idea and have the courage to put it into practical application. The practice of bandaging only one eye is certainly a comfort to anyone, particularly a senile patient who is in strange surroundings. It helps to prevent mental confusion and sometimes dementia.

EARLY AMBULATION OF THE PATIENT

We operate on our patients between 3:00 and 5:00 in the afternoon and the next morning at 9:00 we have them out of bed. They must get out if at all possible. We have them get up in the afternoon and they spend an hour out of bed in the morning and afternoon following the operation.

We feel this helps to prevent circulatory and respiratory complications and it adds to the patients comfort and well being. We no longer hear people complaining of distressing backache after maintaining the same position in bed for a number of days.

When this procedure of early ambulation was first introduced in our clinic, we were subjected to a great deal of critcism by some of our colleagues and they insisted we were inviting disaster and all types of complications. Experience proved they were wrong. Nothing gives more comfort to the patient, when they come to the hospital for operation, than being told that only one eye is to be bandaged, that they will be out of bed the day following operation, and that their hospital stay will be only seven or eight days.

THE MANAGEMENT OF A CASE OF GLAUCOMA COMPLICATED WITH CATARACT

The management of the glaucoma patient complicated by a cataract has always taxed the ingenuity of the ophthalmic surgeon. The pendulum of opinion has swung back and forth between operating first to relieve glaucoma or first to remove the cataract. We have done both procedures and neither has been too successful in our hands.

We have at last been converted to the procedure first advocated by Birge of Hartford, Connecticut; that is, doing the combined Iridenclesis and Cataract Extraction. This, in our hands, has been performed on 6 patients and, so far, the results have been uniformly good.

Here again is a controversial opinion, one that will require time and observation to prove its validity. It is not our purpose to upset the equilibrium of any ophthalmic surgeon here but if you are not satisfied with the procedure you have been following in treating this complication we suggest you give this procedure your consideration.

SIMULTANEOUS REMOVAL OF BILATERAL CATARACTS

This procedure is one that has not been adopted and has been reported in the literature by very few operators. The objections to this procedure are many and there are few indications for it. Again, when anyone advocates a new procedure that is contrary to the prevailing opinion and sentiments he runs the risk of being called radical.

We have performed simultaneous cataract extractions on four patients and in two instances we have

operated on both eyes during one hospital stay at five day intervals. Some of the objectives to bilateral cataract extractions are obvious.

First, any intraocular operation is fraught with hazard. Should a complication such as an intraocular hemorrhage occur and the patient become aware that something has gone wrong, the psychic strain may damage the fellow eye. Second, there is an increased possibility of intraocular infection. With antibiotics, chemotherapy and steroids, however, intraocular infection at the present time is of little clinical significance. With the use of tranquilizing drugs the patient is more easily controlled and there is less likelihood of complications developing from emotional upset or strain. Third, after this operation, for 24 to 48 hours you have to bandage both eyes, and this, as previously mentioned, causes confusion in some patients. With the use of Thorazine, that complication can usually be prevented.

The added financial burden of two operations and the necessity of subjecting the patient to two hospital admissions is avoided by the simultaneous operation.

In selected cases, this procedure is something that should be given careful consideration. In an elderly patient, where the cataracts are about the same stage of development in both eyes, and the patient lives at some distant point making it very difficult to come back and forth for treatments, the simultaneous operation may be desirable.

In suggesting this procedure, we do so with a great deal of hesitation. We do feel that this advance, like other advances in cataract surgery, will have a wider acceptance in the future. Only time and careful observation and reporting of results will prove or disprove the merits or the demerits of the procedure.

ACROLIC LENS

In recent years a very daring and dramatic attempt has been made by some operators, particularly Ridley, to implant a lens in front of the cataract extraction which would serve the same optical effect as the normal lens, thus enabling the patient to have binocular vision following cataract extraction.

This procedure has not been accepted but, it might be added, it is still in the experimental stage and like all new procedures it has to go through the heat of the kiln before it can be properly evaluated. More and more surgeons are trying some type of lens implant that will give the patient binocular vision.

Reese, of Philadelphia, in the September 1957 issue of Archives of Ophthalmology, reported on 115 cases over a five year period. His results gave him sufficient encouragement to continue to try the procedure. It is our opinion that this type of procedure will be more widely used in the future by skillful surgeons. It is highly possible in the near future that some ingenious surgeon may not only replace the cataractus lens but may devise some means of changing its focus or making bifocals so that from the ocular standpoint it will result in a rejuvenation.

The greater danger at the present time of the Ridley operation is the postoperative reaction. This is not difficult to understand when you realize the patient has undergone two procedures, the cataract extraction and the lens implantation.

USE OF CONTACT GLASS IN THE APHAKIC EYE

We feel that the ophthalmic surgeon should make use of the contact glasses in Aphakic eyes. Many patients wear these with comfort and satisfaction. Binocular vision is a most useful visual aid.

PROGNOSIS

The future progress of cataract surgery lies in better diagnosis; better preparation of the individual patient; better surgery; the discard of procedures known to be traumatizing and ineffective, and the fitting of the best and most advanced techniques to the individual cases.

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Review of Gastrectomies in a One Hundred and Seventy-five Bed Community Hospital

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FERNANDO CROTTE, M.D.
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THE PHYSICIANS of ancient and medieval times were as much concerned about disturbances of digestion as are physicians of the present era. Hippocrates, who was born 460 years before Christ, made the observation that the vomiting of blood with fever is bad—without fever, it may be cured.

Pean in 1879 performed the first partial gastrectomy. However, the patient did not survive the operation. Bilroth, two years later in 1881, performed the first successful partial gastrectomy, using the procedure now known as the Bilroth I. Later in 1885, Bilroth devised a second procedure now known as the Bilroth II and it is the model for many of the present day subtotal gastrectomies. In recent years, there has been considerable utilization of modifications of the Bilroth I operation, especially in gastric ulcers and in duodenal ulcers, without extensive scarring and deformity of the duodenum.

The purpose of this presentation is to evaluate the immediate results of gastrectomies performed in a 175 bed community hospital with the results in similar hospitals and in the larger clinics. From January 1950 to December 1954, 89 patients at our hospital underwent a subtotal gastrectomy for various pathological conditions. These 89 cases, taken from the records of our hospital, constitute the clinical material for this study.

The number of cases for each year of the study, with yearly mortalities, was as follows:

NUMBER OF CASES IN EACH YEAR

Year	Cases	Deaths
1950	16	0
1951	9	0
1952	13	0
1953	23	2
1954	28	2
Total	89	4

Of the 89 cases, 76 were performed by members of the surgical staff and 13 were performed by surgical residents under the direction and supervision of the attending staff.

Presented at the Annual Meeting of The Medical Society of Virginia, Washington, D. C., October 27-30, 1957.

Private	76 Cases	9 Surgeons (26,18,18,7,4,2,1,1,1)
	3 Deaths	3.94% Mortality
House	13 Cases	4 Residents (4,4,3,2)
		7.7% Mortality
Total	89 Cases	
	4 Deaths	4.49% Mortality

All mortalities occurred in ulcer cases, none in cancer cases.

The 89 cases were divided as to sex and race and lesion as follows:

	Male	Female	White	Colored	Total
Duodenal Ulcer	43	5	46	2	48
Gastric Ulcer	22	6	24	4	28
Marginal Ulcer	1	0	1	0	1
Cancer	8	3	9	2	11
Leiomyoma	1	0	1	0	1
Total					89

The high incidence of ulcers of stomach may have been due to the fact that duodenal ulcers are more likely to be treated medically, whereas persistent ulcers of the stomach are treated surgically.

The ages of the patients were as follows:

	Youngest	Oldest	Average
Duodenal Ulcer	29	68	47
Gastric Ulcer	22	74	51
Cancer	36	68	56

Of the 89 cases in our series, 17 had had previous stomach surgery in the form of 12 perforated ulcer closures, 4 posterior gastroenterostomies, and one Judd pyloroplasty. Two of these seventeen cases later developed carcinoma of the stomach, one had had a P.G.E. in 1910, the other a P.G.E. in 1923, showing that previous stomach surgery for ulcer does not rule out the incidence of cancer in these patients at a later date.

17 Cases Had Previous Stomach Surgery
- a. 4 P.G.E.
- b. 12 Perforated Ulcer Closure
- c. 1 Judd Pyloroplasty

2 Cases Later Developed Carcinoma of Stomach
One had P.G.E. in 1923, the other in 1910.

The question as to whether gastric ulcers become malignant or gastric carcinomas ulcerate is still a

moot one. The differentiation between gastric ulcer and gastric carcinoma brings in an application of Hippocrates dictum, "experience is fallacious, and judgment difficult". In general, 10% or more of gastric lesions thought to be ulcer turn out to be carcinoma at operation.

The anesthesia in our series was quite uniform and seldom varied from pentothal induction, endotracheal intubation and maintenance with one or several agents such as cyclopropane, ether and nitrous oxide.

The time the patients spent in the hospital was as follows:

Time in Hospital

	Preoperative Days	Postoperative Days	Total Days
1950	9.75	17.12	26.87
1951	7.44	17.22	24.66
1952	5.61	14.69	20.30
1953	5.61	13.43	19.04
1954	5.31	13.57	18.88
Average	6.49	14.76	21.25

There was an obvious trend toward less hospital stay both preoperatively and postoperatively and it is believed that this trend has continued.

The average operating time of all surgeons by years was as follows:

Operating Time in Minutes

Year	Minutes
1950	213
1951	159
1952	174
1953	177
1954	183

Average—185 Minutes

It was felt that the operating time and hospital stay of patients with previous stomach surgery might be prolonged, but a careful review of these cases did not substantiate this supposition, also the incidence of complications in patients with previous stomach surgery was not appreciably increased.

Average Operating Time and Length of Stay of Patients with Previous Stomach Surgery

Operating Time in Minutes	195
Preoperative Stay	5.17 Days
Postoperative Stay	15.64 Days

Total Hospital Days—20.81

The time when the patient is allowed to ambulate depends to a great degree upon the individual surgeon and his thoughts on this subject. Average day of ambulation:

Day of Ambulation

1950	9.25 Days
1951	8.77 Days
1952	5.50 Days
1953	6.23 Days
1954	4.40 Days

Average—6.43 Days

It is very gratifying to note that there has been a definite trend toward earlier ambulation of patients in the short period of this study and it is hoped that there has been further improvement in the ensuing few years.

The length of time that the Levine tube is allowed to remain also depends to a great degree upon the individual surgeon and in our series was as follows:

Length of Stay of Tube

1950	4.62 Days
1951	4.11 Days
1952	5.38 Days
1953	5.45 Days
1954	3.80 Days

Average—4.65 Days

The types of operation performed were as follows:

Polya	60 (One retro-colic)
Hofmeister	27 (Four retro-colic)
Esopago-gastrostomies	2

There has been an increasing number of Hofmeister operations performed in the past few years.

The pathological diagnoses of these 89 cases were as follows:

Gastric Ulcer	28 (11 Pyloric)
Duodenal Ulcer	19
Cancer	11
Marginal Ulcer	1
Leiomyoma	1
Chronic Gastritis	29
Total	89

In the eleven cancer cases, the preoperative diagnosis was carcinoma in eight cases, persistent benign gastric ulcer in 2 cases and pyloric obstruction in one case. In 29 cases with pathological diagnosis of chronic gastritis, the preoperative diagnosis was duodenal ulcer in 28 cases, and gastric bleeding in one case. Marked hematemesis was the major presenting symptom in eight of these 29 cases. In a number of the cases, with a pathological diagnosis of benign ulcer of the stomach, the preoperative diagnosis was carcinoma of the stomach. All in all, the preoperative diagnoses corresponded very closely with pathological diagnoses, except in the instance of those cases with the pathological diagnosis of chronic gastritis.

Three of the four mortalities occurred in patients in which the lesion was not included—all diagnosed preoperatively as duodenal ulcer, two bleeding, one with retention. One of these cases died as a result of uncontrolled postoperative bleeding.

A number of our surgeons feel that it is better to resect proximal to the duodenal ulcer when there is extensive scarring and deformity of the duodenum, even in the presence of bleeding duodenal ulcers.

To evaluate this point we have closely analyzed the six cases which had pronounced postoperative bleeding and are able to show that four of these cases also had marked preoperative bleeding. The diagnosis in each of these four cases was that of duodenal ulcer, and in three of these cases the lesion was not included, while in the fourth case it was only partially removed. The question comes to mind as to whether the postoperative bleeding was from the ulcer which remained after surgery.

No. 1 (48) 62 W M 3.5 RBC Marked deformity of duodenum bulb. Preop stay 5 days.

No. 2 (49) 74 F W 2.6 RBC Ulcer lesser curv. Preop stay 1 day.

No. 3 (79) 49 W M 3.2 RBC Duod. ulcer. Preop 1 day.

Of the eleven cases of carcinoma of the stomach which had a subtotal gastrectomy during this period, there is only one surviving at this time. This was a 54 WM who had had symptoms for four months. X-rays showed a lesion of the greater curvature of the stomach. Operation on May 26, 1950. Pathological diagnosis was Adenocarcinoma Grade II. Of the other ten patients, seven died within one year, one lived for three years, another for nineteen months and the last for thirteen months. With only one patient living at this time we have a seven year survival rate of nine per cent.

Cases With Severe Postoperative Bleeding

Preop. Diagnosis	Lesion Included	Pre-op.	Post-op.	Op.
Contr. Duod. Bulb	No	2000 cc	1500 cc	2000 cc
Ulcer Duod. Bulb	No	3000 cc	1500 cc	1000 cc
Duod. Ulcer c Bleeding	No	4500 cc	1500 cc	1500 cc
Duod. Ulcer	Yes	—	3000 cc	1500 cc
Duod. Ulcer c Bleeding	Partially	2000 cc	2000 cc	2000 cc
Pyloric & Duod. Ulcers	No	—	500 cc	1000 cc

We then evaluated the 26 cases with extensive preoperative bleeding and found that four of these cases also had extensive postoperative bleeding, with one expiring as a result of the bleeding. In this group of cases there were 3 deaths. Our one instance of duodenal stump leakage occurred in a case with extensive preoperative bleeding. The incidence of major complications was found to be greatly increased in patients with severe preoperative bleeding.

Of the 26 cases with extensive preoperative bleeding the pathological diagnoses were as follows:

Chronic gastritis (duodenal)	9
Duodenal Ulcer	8
Gastric Ulcer	5
Cancer	4

In these 26 cases, surgery was performed within the first 24 hours on only 5 patients—2 duodenal ulcer, 2 gastric ulcer and 1 chronic gastritis.

The average preoperative stay for the other 21 patients was 9.8 days.

The 3 fatalities in this group were operated on 1, 1 and 5 days after admission.

Major Complications Were as Follows

Diagnosis	No. of Cases
Duodenal Fistula	1
Evisceration	4
Atelectasis	7
Pneumonitis	2
Post Operation Bleeding, marked	6
Phlebitis	1
Delay in Emptying of Stoma	6
Ileus, Prolonged	5

Other complications such as neurogenic bladder, auricular fibrillation, wound abscess, pulmonary edema with left ventricular failure, fracture of clavicle, and urticaria from penicillin, occurred in individual patients.

The question as to whether prolonged operating time increases the incidence of complications was evaluated and it was found that in the 32 cases with an operating time longer than the average, that there were 6 instances of major pulmonary complications. Three out of the four cases of evisceration found in the series were present in the cases with operating time longer than the average time. Two of the four mortalities in our series and the one case of "blow-out" of the duodenal stump, occurred in the patients

with an operating time longer than the average of 185 minutes.

MORTALITIES

There were four deaths in the 89 cases, giving a percentage mortality of 4.49%.

Mortalities	Indication	Cause of Death
62 WM	Bleeding Duodenal Ulcer	Severe Post Operative Bleeding
74 WF	Chronic Stomach Ulcer with Bleeding	Left Heart Failure with Pulmonary Edema
48 WM	Massive Hematemesis	Duodenal "Blowout"
48 WM	Duodenal Ulcer with Retention	Evisceration, Peritonitis, Atelectasis

No. 1 62 WM—GI series showed active penetrating postbulbar duodenal ulcer. On admission RBC 3.5, 71% Hb. Lesion not included. Died 5 days postoperatively after severe postoperative bleeding. No post mortem.

No. 2 74 WF—Three year history of stomach ulcer. On admission Hb. 8.2 gm. (53%). Large ulcer lesser curvature, proximal end. Died on 2nd postoperative day in pulmonary edema with left ventricular failure.

No. 3 48 WM—Admitted following massive hematemesis. Operated the following day. Large penetrating ulcer of the duodenum with brisk arterial bleeding. Went into irreversible shock due to peritonitis resulting from a "blowout" of the duodenal stump. Died 7th postoperative day. *Lesion not included.* Post Mortem obtained.

No. 4 48 WM—GI series showed an active duodenal ulcer with retention. At operation had subtotal gastrectomy, cholecystectomy and appendectomy. Lesion of duodenum not included. Evisceration on 11th postoperative day, secondary closure performed. Went downhill and expired on the 16th postoperative day. *Postmortem* showed plastic peritonitis, abscess beneath incision, atelectasis of lower lobes bilaterally, ascites, edema of lungs, and hypertrophy of heart.

Comparison of our mortality rate with the rates in similar hospitals and also the larger clinics:

Results of Gastrectomies

	Number	Year	Type	Mortality
Mayo Clinic	1000	('48)	All	3.8%
	1000	('49)	All	2.4%
	1000	('50)	All	2.7%
	1000	('51)	All	3.9%
Lahey Clinic	660		Duod.	2.5%
	221		Gastric	3.1%
Reams	200	('51-'54)	All	11.5%
Stewart	120	('44-'49)	All	10.0%
Sanders	101	('43-'54)	Ulcer	3.0%
Babson	75	('46-'53)	All	5.3%
Hinchey	308	('39-'53)	All	16.0%
Palmer	194	('40-'52)	All	9.03%
Alexandria	89	('50-'54)	All	4.5%

SUMMARY

1. From January 1950 to December 1954, 89 subtotal gastrectomies were performed in our 175 bed community hospital. There were four deaths in this group giving a percentage mortality of 4.49%.
2. Seventeen of our eighty-nine cases had had previous stomach surgery and in two of these who had had PGE's in 1910 and 1923, the pathological diagnosis was carcinoma of the stomach.
3. During the period of this study, there was an obvious trend toward less hospital stay both preoperatively and postoperatively.
4. The operating time and hospital stay of patients with previous stomach surgery was not prolonged and the incidence of complications was not increased.
5. The average length of stay of Levine tube was longer and the average day of ambulation was later, than found in the larger clinics and teaching institutions.
6. Of the eleven cancer patients in this series, only one, a patient operated on in 1950 is still living. A seven year survival rate of 9%.
7. Of the twenty-six cases with extensive preoperative bleeding, four cases had extensive postoperative bleeding. There were three mortalities in these twenty-six cases. The one instance of duodenal stump "blowout" occurred in this group.
8. In the patients with severe preoperative bleeding who were operated within the first twenty-four hours after admission, the morbidity and mortality rates were found to be greatly increased.
9. In thirty-two cases with operating time longer than the average, there were six major pulmonary complications. Three of the four cases of evisceration and the one case of duodenal stump leakage were in this group.
10. In the twenty-nine cases with pathological diagnosis of chronic gastritis the main complication was that of bleeding postoperatively and it occurred in four cases. The preoperative diagnosis in these cases was that of duodenal ulcer.

11. Of the six cases with severe postoperative bleeding, four also had pronounced preoperative bleeding.

CONCLUSIONS

1. The mortality and morbidity rates following subtotal gastrectomy in our 175 bed community hospital compare very favorably with those of similar hospitals and with those in the larger clinics.
2. Previous stomach surgery for peptic ulcer does not rule out the incidence of cancer at a later date.
3. In patients with extensive preoperative bleeding, complications and mortalities are increased.
4. Prolonged operative time increases the incidence of major complications.

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Test for Normal Speaking Voice

A simple singing test that helps determine the correct pitch of a person's speaking voice was described in the April Archives of Otolaryngology. Writing in the American Medical Association publication, Dr. Heston L. Wilson and Warren R. Dawson, Ph.D., Seattle, said the test, along with a simple vocal exercise, can be used by doctors to help their patients correct speech problems. They noted that the use of "improper pitch is a very common type of vocal abuse."

A person can determine his proper pitch by first singing his lowest note. Frequently this is the pitch employed for his speaking voice. Then he sings a scale. A very definite change in the resonance and timbre of the tone occurs about the fourth full tone above the lowest note that he is able to sing. A musically trained ear is not required to note the more pleasing quality of the voice at this level. A person is often surprised at the ease with which these tones are sung.

The pitch is subsequently checked by the person's placing his fingers tightly in his ears and again singing the scale. He is asked to find the pitch at which his ears shake or vibrate the most. Usually this is quite apparent and the tone is the same as the one found when singing the scale.

Next the person hums while making a vigorous chewing motion. He should not attempt a tune, but only the note most comfortable to him. The resultant tone is his normal speaking voice.

This humming and chewing may be used as a daily exercise. A person's ear becomes accustomed to this tone and he soon adjusts to the normal speech level.

Only a few seconds are required to habituate the ear to the new speech level, but a person must make a concerted effort to maintain this speech level in normal speaking circumstances.

Radiological Practice with Psychiatric Patients

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RADIOLOGICAL PROCEDURES undertaken as part of the care of the mentally ill present several problems which manifest themselves not only in full time psychiatric practice but also are seen in most general hospitals. It is a well known observation that a patient who has organic pathology, and whose illness or injury is either in the acute or the chronic phase, may develop complications which produce mental symptoms and, therefore, indicate a specialized type of care and a somewhat different approach to that employed in the patient of normal mentality. This paper, based upon several years of specialized experience in Radiological Technology with the mentally ill, seeks to clarify some of the more outstanding problems encountered in the treatment of these patients.

In practice, and for purposes of general discussion, it is convenient to employ some type of classification. It is possible to define four main groups of patients based upon their etiological and symptomatological attributes. These groupings, of course, need to be interpreted with flexibility since during the progress of any patient's illness, it may be found that his symptoms change and, therefore, place him more correctly in a group other than that to which he was originally assigned. With this reservation, the groupings are listed and will be discussed in detail.

CLASSIFICATION

Group I. The patient of average, or above average intellectual ability without severe psychotic symptoms.
Group II. The Unresponsive patient
Group III. The Overactive patient
Group IV. The Negativistic patient

Group I: The patients considered to belong to this group are those who retain good contact with their environment, are sufficiently aware of reality to understand the purpose of any procedure to which they may be subjected, and are sufficiently intelligent to understand an explanation of the nature of the examination. Specific examples of patients in this category would be those suffering from psychoneurosis, chronic alcoholism, mild depressive or manic reactions. It is often possible to allay the fears they may have by giving a thorough, though necessarily non-technical explanation of the procedure about to be undertaken and, in this way, it is often found that these patients can be persuaded to cooperate both actively and usefully with the examiner. In the writer's experience, patients have often demonstrated a quite unrealistic anxiety about radiological procedures. This may stem, in part, from pure ignorance of the nature of the examination, or on the other hand be derived from anxiety induced by other treatment procedures which have been employed in their cases. Patients occasionally associate the instruments they see in the radiology department with other electrotherapeutic apparatus and fear that during the procedure they might receive a shock from the machine. It is, therefore, apparent that if any anxiety of this sort is displayed or expressed by the patient, a simple explanation of the working of the apparatus about to be used bolsters up the patient's confidence. Having gained the patient's confidence, the examination can be completed with a minimum of waste in time. Films exposed will be of higher quality and waste caused by the necessity of repeated exposures will be reduced.

Groups II: The principal difficulty encountered in treating these patients is their apparent indifference to others, and their lack of response to conversation. It will be noted that they are described as "*apparently*" indifferent. The use of the word apparent is worth stressing since the indifference we observe in these patients is limited to their motor responses and their emotional and verbal display. Contrary to what might be deduced from outward appearances, many of these patients are acutely aware of the activities of others and during recovery from their illness will show very clearly that they were aware of their surroundings and of the statements of others even during the most severe stages of their affliction. The indifference is, therefore, more correctly to be considered as an inability to respond to emotional stimuli in a normal way. In the diagnostic classification, these patients are represented as various types of Depressive Reaction, and some forms of Schizophrenic Reaction.

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It will be appreciated that correct management of these patients calls for a high degree of understanding on the part of the technician as well as the exercise, on occasion, of much tact. Skill and thorough knowledge of his profession are also an indispensable necessity if Roentgenograms of good quality are to be produced. Usually the patient will maintain the posture in which he has been placed, but it is important to attain correct positioning as quietly and quickly as possible. Any adjustments which can be made to apparatus before the patient is placed in the correct position should be done before the patient arrives for his examination. When correct placement has been achieved, further adjustments should be made as quickly as possible and exposure time should be as short as possible, consistent with the maintenance of good quality.

Group III: These patients, from the very nature of the symptoms they display, create problems not usually encountered by the radiological technician. In the first place their overactive and often noisy behavior is liable to be upsetting to the routine of the department as well as to other patients awaiting examination with whom they come in contact. It is, therefore, good procedure for those anxious to have a well run radiology department to organize their facilities so that these patients may be serviced in a way which avoids unpleasant incidents, or serious delays in the work of employees and on the part of other patients. In cases which do not present an acute urgency for x-ray examination, a consultation with the physician concerned may be of value in that it is often possible to delay the investigation for a few days without detriment to the patient, during which time treatment of the psychiatric condition will result in improvement such as to allow the radiological examination without any major difficulty. In some cases, such procedure is not feasible and a different approach must be adopted. In a situation of this kind, simple sedation with, for example, a barbiturate may produce sufficient suppression of the patients overactivity. Each case will obviously require treatment on an individual basis and in some of the most severely disturbed conditions, it is only possible to proceed after an intravenous anaesthetic, such as Sodium Pentothal, has been given by the physician. Positioning of these patients, of course, is a problem in itself and here again, short exposure methods represent the technique of choice.

Group IV: The negativistic group of patients are perhaps the most difficult of all to treat. Examples typical of this category are mostly sufferers from a severe type of schizophrenic reaction, occasionally also the feeble minded patients and some suffering from organic brain damage. The members of this group often react quite violently against any suggestion made to them. Thus caution, tact and understanding are essential for their correct treatment. In many instances it is quite impossible, even after the most exhaustive attempts have been made, to secure cooperation from patients of this type and the only resort lies in the use of sedatives. In the past, these patients might have been subjected to some form of mechanical restraint, however, current psychiatric opinion, and indeed humanitarian medicine, militate against such an approach since it is always possible to perform the required procedures after the application of a more enlightened means of controlling the patients propensities to react in a violent way. Fortunately patients of this type are only rarely encountered at the present time, due to the development of methods whereby their symptoms can be controlled within a very short period of time.

Having outlined our classification, examples may now be given of specific problems likely to be encountered.

In mental hospital practice, it is usually established routine to perform chest x-rays at regular intervals on all patients. If no facilities are available for using exposures of very short duration, as is often the case in small hospitals not possessing the larger types of installation, evidence of movement will show on the films. It is possible to minimize this in many cases by starting to expose towards the end of inhalation rather than waiting and asking the patient to hold his breath. In practice, the use of an exposure time of one tenth of a second and a current of 150 milliamperes coupled with an increase or decrease of the kilovoltage as indicated will produce results that are technically acceptable. Of course such procedure is no match for work which can be produced with the best available facilities but it is worthy of mention because so many small hospitals and clinics must perforce do this kind of work, using only the simplest type of an installation.

A difficulty worthy of mention is sometimes met in taking skull films of disturbed patients. Unless cooperation can be secured it is often necessary to maintain the position required for exposure against the will of the patient. Short of the administration of a general anaesthetic it is usually impossible to expect any considerable help from other pre-medica-

tion. Experience here has demonstrated that the services of an assistant who can maintain the patient's head in position for the required time by the use of his hands, is helpful since, as mentioned earlier, the use of other restraints is to be avoided.

Many other examples involving specific situations could be mentioned but there are no set rules which can be made to apply to all situations likely to be encountered. The matters mentioned will serve as illustrative examples.

It is of first importance that the technician realize from the onset that in treating the mentally ill, he will often have to depart quite markedly from his usual techniques and that, if his efforts are to meet with success, it will be necessary for him to be prepared to devote much time to the preparation for the procedure which he intends to undertake. For those who come into regular contact with this type of work, some acquaintance with the enlightened approaches to mental patients, developed in current psychiatric practice, will be a decided advantage.

Finally mention should be made of the necessity for all those doing regular work with mental patients to protect themselves against overexposure to radiation. Because of the very nature of this work, the technician is at greater hazard than usual in other types of radiology departments. Use must always be made of the assistance which can be given by the nurse or attendant who accompanies the patient to the examination. Dental films with clips should be used to measure radiation hazards and leaded aprons worn routinely. The usual procedures for control such as regular haematological examinations are of prime importance.

SUMMARY

A symptomatological classification of psychiatric patients for assistance of the radiological technician is proposed. Matters pertaining to each type are discussed. Mention is made of the necessity for protection against radiation hazards in performing this type of work.

Acknowledgement: The author wishes to express thanks to Dr. B. E. Roebuck, Director of Training and Research, Eastern State Hospital for his assistance in the preparation of this manuscript.

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Pigeon Related to Skin Disorder

The migration of pigeons to suburbs is creating still another hazard for the harassed suburbanite—the danger of being bitten by a pigeon parasite.

Large numbers of pigeons formerly living on office buildings have been driven from city business districts and are now nesting around homes in suburban areas. When they moved, they carried with them Dermanyssus gallinae, commonly called the chicken mite. The mite lives on blood—usually that of fowl, but on occasion it will attack humans.

Fourteen cases of humans being bitten by chicken mites carried by pigeons were reported in the April Archives of Dermatology, published by the American Medical Association. Dr. Gerard A. DeOreo, Cleveland, noted that the medical literature has numerous reports of dermatitis resulting from D. gallinae, but the pigeon has seldom been recognized as a vector.

The commonest skin reaction from the mite's bite was a red spot resembling a mosquito bite. There was usually a clustering of three to six individual red spots. Itching developed a few moments to several hours after the bite had been inflicted.

Successful treatment depends on recognizing that the common pigeon may be the source of mites and eradicating the pigeons' nests.

A number of potent acaricides, chlorophenothane (DDT), chlordane, and lindane, are effective in the destruction of mites. An emulsion containing benzoate, benzocaine, and DDT is a useful repellent when applied to the skin.

The pigeon should be suspected as a possible cause of itching skin disorders of obscure origin in the spring and summer.

Public Health . . . .

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Obstacles to Adequate Care for the Aged

Last February the Public Health Service sponsored the First National Conference on Nursing Homes and Homes for the Aged to provide a forum for airing problems and to develop practical proposals for correcting them. The health aspects, as well as the financial aspects, were discussed with the purpose of providing a clearer understanding, a firmer purpose, and a wider vision of individual and collective responsibilities for patients in nursing homes and residents of homes for the aged.

During the four day conference held in Washington, D. C., February 25-28, 1958, there were brought out a number of obstacles which hamper us in providing adequate care for the aged. Following are excerpts from the address given by Dr. L. E. Burney, Surgeon General of the U.S. Public Health Service, which brought out some of these points so well.

"Facilities and services that permit better care are at the center of the larger problems surrounding the older person in our society. Lack of enough high-quality institutions of the nursing home or home for the aged variety is the central factor in the total problem of medical, health, and hospital services throughout the country.

"This lack keeps tens of thousands of older patients in general hospitals for prolonged periods of time beyond what they need or can even benefit from in 'full-dress' hospital services.

"The lack of enough of these institutions places persistent and exorbitant demands upon many communities for additional general hospital beds. The needs of the increasing populations for care in acute illness cannot be left unmet. The higher costs of construction and operation of the ever increasing general hospital facilities are rapidly becoming a burden which the individual communities, the states, and even the total national economy cannot bear in the face of other urgent needs.

"The lack of enough high-quality nursing homes and homes for the aged, or their equivalents, raises the cost of general hospital care. Already these costs are at levels beyond the reach of most families without hospital insurance. In addition, the costs are at levels restricting the scope and volume of benefits afforded the insured.

"The lack of enough high-quality institutions of the nursing home variety denies good care to hundreds of thousands of individuals. According to the National Health Survey which has just been completed, about 1,800,000 men and women over 65 years of age report that they are completely limited in their activities because of chronic conditions. This does not mean that all are bedfast or unable to walk. It does mean that they are suffering from chronic conditions to the degree that normal family and vocational life is not possible. This lack of adequate high-quality facilities reduces the chances of hundreds of thousands of these people to live normal lives.

"A second major obstacle to adequate care for the aged is the aged individual's attitude of restraint and withdrawal. Common sense tells us that a person who is so resistant to necessary change is not going to be an easy person to help. Unfortunately we do not know much about what happens in this period of the later years, for until illness or accident really incapacitates them, older people tend to stay out of sight and out of the minds of others, and when illness is superimposed—as inevitably it is—beneficial effects of medical, psychological, and social treatment are much more difficult to achieve.

"Often the family is another obstacle to better care and better health of an older person. Sometimes it is a daughter who has given the best years of her life to a tyrannical invalid, and now puts 'Mother' in a nursing home with such highly charged emotions that her every visit brings on another crisis in the patient and the nursing home staff. Sometimes it is a son and daughter-in-law who deposit 'Father' with ill-concealed satisfaction and are never seen again. Sometimes it is an aggregation of nieces and nephews, scattered from Maine to California, each with growing families of their own, and all concerned more with who is to claim 'Auntie' or 'Uncle' as an income tax exemption than with the kind of care their relative is receiving.

"Finally, the community is the greatest obstacle of all to better care and better health of patients in

nursing homes and residents in homes for the aged. The community is all of us—the health and welfare professions, the families, the older people, and other citizens in every walk of life.

"The community, by its collective attitudes and resistance to change, has placed the nursing home and home for the aged in the same 'withdrawal' situation that characterizes so many of the older people in these institutions. The community has allowed the remarkable scientific and technical advances of this century to by-pass the nursing homes and homes for the aged.

"Deeply rooted in the community consciousness is the age-old dread of institutions. Until very late in the nineteenth century, the general hospital shared the same ill repute as a nursing home, the county farm, and the old folks' home, as being a place for the sick poor to go—and die. Today the hospital is a place for all classes to go—and live.

"But the nursing home and home for the aged still rouse in the public mind the same dread as nearly a century ago. They are still regarded as the point of no return. Yet the same great advances in medicine, psychiatry, sociology, architecture, construction, equipment, and personal services which have revolutionized the community general hospital are applicable to the nursing home and home for the aged, as many existing institutions have demonstrated.

"No community—large or small—can remain indifferent when the call to action comes from men and women who are close to the human problems of old age."

MONTHLY REPORT OF BUREAU OF COMMUNICABLE DISEASE

	April 1958	April 1957	Jan.-Apr. 1958	Jan.-Apr. 1957
Brucellosis	2	1	4	6
Diphtheria	2	2	11	4
Hepatitis	13	51	101	190
Measles	4589	932	9839	2583
Meningococcal Infec.	4	8	34	30
Meningitis (Other)	12	15	74	61
Poliomyelitis	2	3	3	10
Rabies (In Animals)	35	24	158	114
Rocky Mt. Spotted Fever	1	1	1	1
Streptococcal Infec.	789	898	3177	3196
Tularemia	0	0	18	15
Typhoid	1	1	8	14

Doctor-Patient Visits

"John Doe"—the average citizen—sees his doctor about five times during the year, reports the Health Insurance Institute, citing a report issued from the National Health Survey.

Authorized by Congress in 1956, the National Health Survey Program is a continuing study of the health care needs of the American people by the U.S. Public Health Service. It is expected that this study will form the most comprehensive body of information on the state of the nation's health in existence.

Most patients visit the doctor's office, the Institute reported, while home calls by the doctor accounted for less than 10% of the visits.

Some of the early statistics available from the Public Health Survey, which covered the months of July through September 1957, showed that city residents consult a physician more often than those living on farms or in rural areas. People on farms see a doctor at a rate of 3.6 visits per person per year, as compared with 4.5 for the rural non-farm population. In the cities, the rate of doctor visits per person per year was found to be 5.1.

Not all physicians' calls involve treatment. The Survey figures revealed that two-thirds of all doctor visits call for diagnosis and treatment, with the remainder involving preventive care or other such services. While this percentage distribution applies throughout the United States, visits for general check-ups are somewhat less frequent among the rural farm population. In August 1957, 18% of all the people in the country saw a doctor. This is the time of year when the rendering of medical services is probably at a seasonal low, due to fewer cases of common cold, bronchitis, pneumonia, and other respiratory infections.

The generally held belief that more females than males see a doctor was confirmed. National Health Survey data showed that physician visits by females amounted to 5.5 per person per year as against 3.9 among males. For both sexes, the number of calls increased with age, with the exception of children under 5 years of age, where frequency of visits was relatively high. Persons at ages 5 through 14 had 3.4 visits per person per year, whereas those over age 65 averaged 6.8 visits per year.

Mental Health . . . .

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Comparative Study of After Care Clinics at Eastern State Hospital for September 1954-December 1955 and June 30, 1956 to June 30, 1957

The three After Care Clinics operated by Eastern State Hospital in Richmond, Norfolk, and Newport News, interviewed 138 patients during 1954-55, and 166 patients for the year 1956-57. The year 1956-57 had a larger number by 16.9% than the 1954-55 period. (1954-55 will be noted hereafter as the first period and 1956-57 as the second period.) The first period extended actually from September 1954 to December 31, 1955, and was, therefore, four months longer.

During the first period only 4.3% were advised to take drugs after leaving the hospital, whereas in the second period 48.8% were so advised. Because of the small number recommended for drugs in the first period after release, a comparison will not be made between the two periods in this respect.

A total of 247 patients were invited to attend the clinics for the first period—138 reported, 92 did not —and there were 17 that could not be identified for detailed study. The percentage, respectively, was 55.9% reported, 37.2% did not report, and 6.9% unidentified. For the second period, there were 206 invited, of which 166 reported and 40 did not or 80.6% reporting and 19.4% not reporting—all identified.

The average number of interviews of 6 for both periods was the same. The average number of cancelled or failed to report for appointments the first period was 0.7 per patient and for the second 0.6.

The ratio of hospital discharges to patients seen was 49.28% for the first period and 53.62% for the second period.

The return rate, including readmitted after discharge, was 26.08% in the first period and 31.93% in the second period. However, remaining on furlough was 27.5% for the first period and 16.26% for the second period. (This adds to more than 100% for each group because readmitted after discharge are included in returns.) There were 21 patients from the first period still receiving clinic treatment in the second that had not had a formal discharge. Two patients of the first period that had been discharged were readmitted and had clinic service in the second period.

The diagnostic pattern of those seen was quite different in the two periods. During the first period 5.8% were disease of the senium; the second period this was 3.0%. In the functional psychotic group the first period had a total of 55.07% (involutional 8.69%, manic-depressive 10.15% and schizophrenia 36.23%) and the second period the total was 78.31% (involutional 12.05%, manic-depressive 8.43%, schizophrenia 57.23% and other 0.60%). In the personality disorder group, the first period had a higher percentage which totaled 23.54% (16.66% alcoholic, 2.18% drug addiction and 5.80%). The second group had a total percentage of 7.84% (4.22% alcoholic, 0.60% drug addiction and 3.02% other). There were more mentally deficient in the second period—2.41% to 0.73% in the first period.

The higher concentration of patients in the functional psychosis group, especially schizophrenia, could be accounted for in several possible ways—(1) a larger number of furloughed patients are in this group. However, according to the diagnosis of patients on furlough as of June 30, 1957, not as high as the per cent seen in the clinic. (2) The recommendation for reporting to the clinic was given more to the schizophrenic group than others. There may be at least two reasons for this (a) they may need more support after leaving hospital, (b) they may feel that this group with some support may have the better prognosis of staying out of the hospital.

The condition of those discharged was better for the second period than the first. The first period had 36.11% recovered and 55.55% improved; the second period had 47.19% recovered and 47.19% improved, totaling 91.66% and 94.38%, respectively. The recovered group was much higher the second period than the first.

Though the age groups have not been tabulated, it was noticed that some of the children on furlough from Eastern attended the clinics.

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Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

GENERAL COMMENT

In comparing the two periods, the second period showed an improvement over the first. There were more patients who received a formal discharge from the hospital and with a better condition on discharge for the second period than the first.

Even though more patients returned in the second period, their return was suggested by the clinics in approximately one-third of the cases. Even though this may have had an effect on the number of returns, it is possible this was better for the patients than an attempt on their part to remain out longer.

The return rate of those who had clinic service was better than the total returns by the difference between 28.9% for those with clinic service (second period) and the total returns of 43.4% for 1956-57 returns for approximately the same period of time (to December 1957).

The number of patients attending the clinics for 1956-57 was only about 18% of those who were released during the year.

The three clinics operated only about 425 hours for the year. This limits the number of patients that can be seen.

The physicians who staff the After Care Clinics from Eastern State Hospital believe that, if the clinics could be expanded both by staff and geographical area, more patients could be released from the hospital sooner than at presently possible.

Library Exhibit on Doctors and Scientists Who Became Literary Figures

The Medical School Library is showing examples from the writing of a number of physicians and scientists who became authors in fields other than medicine or their chosen field. The exhibit will be up until early fall.

Some of these men actually gave up their chosen field in their enthusiasm for what probably began as an avocation. Others were very successful in medicine or science, and are better known in that field. One, Dr. Ronald Ross, was a Nobel prize winner for his work on malaria. He also wrote essays, novels, lyric poetry and several poetic plays. Silas Weir Mitchell wrote novels, besides his scientific work. Edward Jenner, Erasmus Darwin and Sir Charles Scott Sherrington wrote poetry.

Others did their literary work under pseudonyms. Such is our local Herbert Silvette who uses the name Barnaby Dogbolt for his non-scientific work. There are probably many scientists still unmasked in this category. Peter Wingate, a doctor, wrote a novel, *Dr. Tom,* this year.

The versatility of Albert Schweitzer and Oliver Wendell Holmes are fairly well known. Dr. Holmes, however, is little known today as a writer of psychological novels. Future library exhibits will show scientists as musicians or artists. They will include some of the same names included in the present exhibit of literary figures. Such is the versatility of some of these figures.

Rebelais, Smollett, Oliver Goldsmith, Anton Chekhov, W. Somerset Maugham, Arthur Schnitzler, A. J. Cronin, Francis Brett Young, Frederich von Schiller, John Keats, William Carlos Williams, Francis Orray Ticknor, Havelock Ellis, John McCrae and Oliver St. John Gogarty are considered literary rather than scientific figures by most people.

The Library is showing the work of a psychiatrist who wrote sonnets, the recently deceased Merrill Moore. Another writer, Sir Arthur Conan Doyle, created a physician character, Dr. Watson who seems a real person to his many readers. Among the unclassifiable writers are Axel Munthe, whose *Story of San Michele* has been enjoyed by so many non-scientists, and Homer Smith, who wrote the delightfully philosophical *Kamongo.* Dr. Joseph Collins, through his writing, earned enough money to establish a foundation on a national basis which aids needy medical students, one prerequisite being interest in arts, letters and other cultural pursuits outside the field of medicine.

Pre-Paid Medical Care....

Edited by
RICHARD J. ACKART, M.D.

The Doctors' and Subscribers' Plan.

In these days of instantaneous communication and overnight travel to the most remote places in the world, few nations can claim any social ideas or innovations as exclusively their own. But America can. In the field of medical economics American medicine has produced a program that is truly unique. There is nothing comparable to Blue Shield in any other nation today.

Specifically, in no other country has the medical profession been able to develop a non-profit plan for medical care prepayment in which the participation of both patient and doctor is voluntary, which is characterized by complete freedom of choice for both doctor and patient and by fee-for-service payments that are subject to medical control, which is entirely free of third-party regulation of the doctor's practice, and toward which no governmental agency has contributed one cent of subsidy. As a spokesman for the World Medical Association said recently, "American physicians are singularly fortunate in having met their social and economic problems by voluntary action, turning back the threat of political domination."

Yes, physicians may rightfully be proud of the parts they have played in creating and supporting Blue Shield. It is their Plan—"The Doctors' Plan." But the physicians who have done the most for Blue Shield would be the first to acknowledge that Blue Shield is just as much "The Subscribers' Plan" as it is "The Doctors' Plan." The latter phrase, unfortunately, can be misconstrued; to some "The Doctors' Plan" may imply that the Plan operates mainly for the benefit of the doctor rather than the patient.

Much depends upon the attitude of each individual doctor toward Blue Shield. If he fails to acknowledge his special responsibility toward the Plan —fails to join it as a Participating Physician—or if he takes advantage of Blue Shield, then the doctor should not be surprised if some of his patients conclude that Blue Shield is run largely for the benefit of doctors.

On the other hand, if the doctor looks upon himself, not as the owner, but as the *trustee* of Blue Shield; if he not only is a Participating Physician but also is a true sponsor and promoter of the Plan; if he tries to help his patients understand the program and use its benefits intelligently—then people will accept Blue Shield as another evidence of the idealism and social conscience of the medical profession.

In a word, as "The Doctors' Plan", Blue Shield either can reflect the selfishness of medicine or it can testify to the profession's generosity and community-mindedness. The average doctor's attitude toward the Plan and toward those of its subscribers who come under his care is truly the crux of the matter.

Blue Shield *is* "The Doctors' Plan", not in the sense that the doctors own it, but because they created it, because the profession approves and controls it, because doctors are responsible for the success or failure of the Plan, and because Blue Shield is the most impressive evidence medicine has ever given that it is capable not only of providing good service but also of helping people pay for it.

There is no denying the fact that Blue Shield has brought great benefits to doctors. But doctors must make sure that Blue Shield is no more beneficial for themselves than for the subscribers who support it or their noble social venture might quickly come to an ignominious end—and with its end would come political domination, not as a threat but as an actuality.

The Medical Society of Virginia

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May 1, 1958

This roster is published as a service to the membership and your editors hope you will find it a handy and ready reference.

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Nutrition in Skin Disorders

Contrary to common belief, most common skin disorders are "not significantly connected" with dietary or nutritional allergies or deficiencies, according to an American Medical Association council report. In fact, "dietary factors in acne vulgaris and psoriasis are generally overrated," Dr. Allan L. Lorincz, assistant professor of dermatology at the University of Chicago, said in the report prepared for the A.M.A. Council on Foods and Nutrition. The report appears in the April 12th A.M.A. Journal.

Malnutrition in the form of overeating, which leads to obesity, is "by far the most frequently encountered nutritional disturbance that causes or aggravates skin diseases." Obesity precipitates or promotes a variety of disorders of skin on opposing surfaces of the body (such as the corner of the lips) because of the accumulation of heat and moisture between folds of the skin.

Because dissipation of body heat by conduction and radiation is impaired by a thick subcutaneous fat layer, obese persons become overheated easily and tend to sweat more profusely. Excessive sweating has an adverse effect on normal skin and especially on most inflammatory skin diseases. It affects a number of lesser known conditions—stasis eczema, which occurs on the legs, skin ulcers and striae distensae, which results from excessive stretching of the skin.

"In view of the high incidence of overeating and obesity in the United States . . . it is not surprising that measures aimed at controlling this nutritional problem are frequently necessary in the management of skin disorders."

Specific dietary restrictions are valuable in treating some diseases. Carbohydrate restrictions appear to help in chronic furunculosis (a condition associated with boils) and in hidradenitis (the inflammation of sweat glands). A low fat diet is helpful in treating xanthomatosis, in which there is a disturbance in fat metabolism.

However, dietary restrictions don't appear to have much effect on acne vulgaris. This is supported "by the commonly observed failure of often self-imposed rigid dietary restrictions in unhappy teen-age acne sufferers to result in anything except frustration and undernourishment."

Even in genuine nutritional deficiency, skin manifestations are rarely so distinctive as to allow them to be used as a means of diagnosis.

Vitamin A has been tried in the treatment of a vast array of skin disorders and has been found to be of "unquestionable" value in only the rare diseases pityriasis rubra pilaris and Darier's disease. The B vitamins are of little use in modern American dermatology, although the use of nicotinic acid can be credited with the eradication of pellagra in this country.

"From a dermatological viewpoint, other nutritional factors have mostly only academic interest today; they find little practical application."

Current Currents

LEGISLATION to continue the Hill-Burton Hospital construction program has been endorsed by the American Medical Association. At the same time, AMA recommended a federal guarantee of hospital and nursing home loans under an arrangement similar to that used by the Federal Housing Administration.

Stating that the Hill-Burton program should be continued "for as long as needed", an AMA spokesman suggested the following changes:

1. Eliminate both diagnostic-treatment and public health centers from benefits. He said there is little evidence of "a need or demand" for the "ill-defined" diagnostic-treatment centers. The AMA 14-state survey showed, he explained, that almost 90% of all public health center projects under HB were located in these few states, and that these states were receiving about 75% of all U. S. funds allocated to health centers.
2. Eliminate the mandatory priority given rural communities; the AMA survey showed great progress already has been made in meeting hospital needs of farm and small town areas.
3. Shift emphasis toward facilities for the chronically ill and nursing homes, and toward the modernization and renovation of old hospitals. To make this effective, states should have greater latitude in establishing priorities and allocating funds.
4. Eliminate all categorical grants and substitute one single appropriation for all eligible facilities, thus making it easier for states to make the best use of total money.

MEDICAL SCHOOLS in this country will require $275 million for rehabilitation and reconstruction in the next few years according to the American Association of Medical Colleges. Dr. Lowell T. Coggeshall., AAMC President, said that this total does not provide for needed research and hospital construction. A recent AAMC survey reveals that if construction needs could be satisfied, medical schools would be able to increase the number of graduates from 7,000 to 8,000 yearly.

THE WOMAN'S AUXILIARY is to be congratulated on the excellent Civil Defense Workshop which was sponsored in Norfolk on April 29-30. The two-day program was well planned and attended. It was, as far as your editors can learn, the first such project to be sponsored by a medical auxiliary.

DID YOU KNOW that red and white barber poles are a relic of the middle ages when the barber was also a surgeon, and the spiral stripes on the barber's pole represented the bandage with which the barber-surgeon wrapped his patient after blood-letting.

by itself. I personally believe that we can have a much greater unity of effort and can accomplish much more if we bring the woman's auxiliaries closer to our state and county medical societies.

Today the Woman's Auxiliary to the A.M.A. numbers more than 75,000. More important, however, the auxiliary has had a steady growth over the years because its members have been given jobs to do. It now should be the duty of each state and county medical society to provide more ways for the auxiliary member to serve the medical profession.

An auxiliary member is a tireless worker; she backs away from no task when she is inspired to a cause. She is devoted, selfless, unstinting of her time, creative, clever, practical and resourceful. Give her the opportunity to serve and give the auxiliary full support. You will quickly learn the power of your most valuable ally.

DAVID B. ALLMAN, M.D.

Hopewell.

On April 19th, this Auxiliary held its regular bi-monthly meeting at the home of Mrs. T. C. Andrew. The Constitution and By-Laws were approved and adopted.

The May meeting was held with the Petersburg Auxiliary with a luncheon at the Country Club of Petersburg. Mrs. St. George, president of the State Auxiliary, was guest of honor.

FRANCES C. WYATT (MRS. N. F.)

Tazewell.

This Auxiliary met on April 19th at the home of Mrs. H. A. Porter in Bramwell. Fifteen members and guests enjoyed touring the home and were served a delicious luncheon by the hostess. Mrs. J. R. St. George and Mrs. C. A. Easley, president and president-elect of the State Auxiliary were guests.

Mrs. St. George talked about a Home Preparedness Workshop, held in Norfolk April 29-30, which was sponsored by the State Auxiliary. In cooperation with Civil Defense, the Workshop taught ways that the women of the community can be prepared to meet times of national disaster. She also discussed plans for the State Convention of the Auxiliary.

Wise.

A dinner meeting of this Auxiliary was held at the Inn in Wise, honoring the visit of the State president, Mrs. St. George, and the president-elect, Mrs. Easley.

Mrs. St. George installed the officers for the coming year and gave an interesting report on the progress of State objectives. The following officers were elected: president-elect, Mrs. Delmas Jones; vice-president, Mrs. Charles Swecker; recording secretary, Mrs. Charles Henderson; corresponding secretary, Mrs. Gordon Shull; and treasurer, Mrs. Eugene Bene. Mrs. William Schmidt succeeded Mrs. John Dellinger to the presidency.

D. E. SCHMIDT

Northampton-Accomac.

The Auxiliary to the Northampton-Accomac Medical Societies held its spring meeting on April 8th at the home of Mrs. C. E. Critcher, New York. There were sixteen members and two guests, Mrs. St. George and Mrs. Easley, present.

In the absence of Mrs. R. K. Brown, president, Mrs. J. L. DeCormis presided. Mrs. St. George spoke on the activities of the auxiliary and told of Virginia's plan for Civil Defense and Home Preparedness. Other topics discussed were the American Medical Education Foundation and migratory labor problems throughout the State.

The Auxiliary will be guests of Mrs. W. T. Green, Jr., at her cottage at Wilkins Beach in July.

CATHERINE R. TROWER
Chairman, Press and Publicity

President's Message . . . .

ON APRIL 13TH, 1958, the first Special Meeting of the House of Delegates of The Medical Society of Virginia was called to order in Richmond. This meeting had been provided for at our last Annual Session. Its purpose was to determine whether The Medical Society of Virginia should continue to act as the negotiating agent for the physicians of Virginia in their Medicare problems.

I believe both sides of the question were adequately discussed before the vote was taken. It was the will of the Assembly that we continue to negotiate as we have heretofore, with a request that an attempt be made to have the Government consider an indemnity type program, if possible.

It seems to me that this action should be very sharply eyed and thoroughly considered by every physician in our Medical Society. I can see good points and bad points in Medicare. That problem has been settled. But I sincerely feel that we must do some rather marked reappraising of our own standards of what is right in the principles of our profession.

If it is all right for The Medical Society of Virginia to negotiate a contract with the Federal Government, providing that military personnel be given medical care by civilian physicians at little or no cost to the patient and with the Government paying the bill, then we sanction third party medicine. This fact is incontrovertible. Some will argue that we have already been doing this with insurance-paid medical care. This is true in those cases where the insurance premiums are paid by a third party such as a business firm, corporation or government agency. It is a different situation when the premium is paid by the individual out of his own pocket. He is providing for his own medical care on an installment plan basis.

We do not know how far the Government will go with these ideas. If Congress should so desire, we may be asked to care for relatives outside the serviceman's immediate family. We might be further asked to care for Civil Service employees and their families. A bill has been hinted at that would give all veterans and their families "free" medical care. The Forand Bill has not yet been defeated.

These are not meant to be scare statements on my part. It is my duty, as your President, to help you understand what our position is. I have said the things written above so that you may realize some of the possibilities of the future. Whether or not they will ever happen depends on many factors, of course.

The ice has been broken. We have accepted, by majority vote, a change in one of our basic economic concepts of the private practice of medicine. I feel certain in my own mind that we will be faced with others, from different sources, in the very near future. Each and every one of us should seriously consider these problems. You may have to live with the decisions for a long time.

H C Bates, Jr.

President

Editorial....

The New Look In Women's Shoes

YOUR EDITOR does not feel qualified to pass judgment on the sack or chemise or whatever the current style in women's clothes is called and will gladly defer to Robert C. Ruark of Southport, North Carolina, who already has paid his respects to this aspect of female adornment. A related subject but one about which a mere medical male might be permitted a few observations, is the woman's shoe with the rapier toe and the high thin heel.

For the benefit of those who haven't noticed, the new shoe tapers away to nothing in front like the bowsprit of a Baltimore clipper ship. This may be ideal for a woman who has a classical foot with the second toe longer than the first. Unfortunately, the majority of women have an unclassical foot with the great toe leading by a considerable margin and in this case the first toe has only two courses open to it. It can be pushed beneath the adjoining second toe or it may be crowded above it. In either case a hallux valgus results. The only way this can be avoided is to purchase a shoe a size or two longer than the victim's foot but this merely lessens, without completely relieving the deformity, for this permits the foot to slide forward freely into the point of the shoe.

The current style also demands a heel that is higher and narrower than anything that has gone before. A recent example measured three-eights of an inch in diameter on the half round at the point of contact with the ground. This means that a buxom lass, weighing only 150 pounds, in walking will exert momentarily a pressure equivalent to more than 2500 pounds per square inch or approximately eight times the boiler pressure of a mountain-type locomotive. The destructive potential in such a situation virtually is unlimited. A heel of this size has the penetrating power of a gimlet.

Not only is the bystander jeopardized by so lethal an instrument but the owner of such shoes is subjected to hazards not usually encountered when wearing more orthodox footwear. Street car switches and pavement gratings, to say nothing about the gaps between loosely laid bricks, constantly menace the wearer of such shoes. A friend of the writer had the unnerving experience of seeing a female companion with whom he was conversing diminish three inches in height before his startled eyes as the result of her heels sinking in sod softened by a recent spring shower.

But regardless as to how extreme the present shoe may become the picture is not entirely dark. For those orthopedists and surgeons who treat bunions and ingrowing nails the recession will not be too severe so long as the current style continues.

H. J. W.

The Medicare Meeting

ON SUNDAY, April the thirteenth, the House of Delegates of The Medical Society of Virginia held the first special meeting on record in the Society to decide if Medicare should be continued in its present form. A report on the outcome of this meeting may be found elsewhere in this issue of the Virginia Medical Monthly. Your Editor does not profess to know if this decision will prove to be a wise one but one point deserves to be mentioned.

About ninety members of The Medical Society of Virginia gave up their Sunday plans and came to Richmond to discuss a matter of considerable importance about which there was a wide diversity of opinion. Despite this difference of viewpoint,

no one lost his temper or impugned the motives of those who differed with him. The entire debate was conducted on a high plane and without rancor and reflected credit upon all the participants.

In this era of poor manners and short tempers it is reassuring to know that men of goodwill can settle sharp differences without resorting to harsh words or indulging in personalities. H. J. W.

Society Proceedings . . . .

Alexandria Medical Society.

Dr. James M. Moss has been installed as president of this Society, succeeding Dr. Eugene Grether. Other officers are: president-elect, Dr. Ben C. Jones, Jr.; vice-president, Dr. John D. Hoyle; secretary, Dr. Robert K. Wineland; and treasurer, Dr. Simon Paluchi.

Southwestern Virginia Medical Society.

The spring meeting of this Society was held in Radford, April 10th. The principal feature of the afternoon session was a panel on the use of recently introduced drugs. Moderator was Dr. Elam C. Toone, associate professor of medicine, Medical College of Virginia. Panel members were Dr. Fred Vance, Bristol; Dr. James L. Chitwood, Pulaski; Dr. Moir G. Martin, Hillsville; Dr. M. C. Newton, Narrows, and Dr. John T. Walke, Roanoke. Dr. Charles Crockett, Roanoke, spoke on Diagnosis and Management of Pheochromocytoma; Dr. Benjamin S. Perkins, Marion, on Post Traumatic Fat Embolism; and Dr. C. C. Hatfield, Saltville, on Duodenal Ulcers in Children.

The banquet address was given by Dr. Daniel A. Cannaday, professor of history at Radford College. His topic was Unusual Aspects of the History of Southwest Virginia, Especially Those Relating to Medicine.

The Virginia Society of Ophthalmology and Otolaryngology

Held its thirty-ninth annual meeting in Richmond, May 2-3, under the presidency of Dr. Emanuel U. Wallerstein, Richmond.

The scientific program was as follows: Psychogenic Headache by Dr. Richard O. Smith, Pulaski; Factors Concerned in Toxic Reactions to Local Anesthetics by Dr. J. H. Weatherby, Richmond, invited guest; The Retinal Venous Obstructive Syndrome by Dr. George N. Wise, New York, invited guest; Abscess of the Septum by Dr. Edwin D. Vaughan, Richmond; Amblyopia Exsanguinata by Dr. William F. Hatcher, Roanoke; Foreign Bodies of the Bronchus with Subsequent Pneumothorax as a Complication by Dr. W. Copley McLean, Charlottesville; Fitting of Contact Lenses in the Ophthalmologist's Office by Dr. Charles A. Young, Jr., Roanoke, and Dr. Marion C. Waddell, Richmond, invited guest; Cancerous and Precancerous Lesions of the Conjunctiva and Cornea by Dr. Ronald B. Harris, Roanoke, invited guest; Carcinoma of the Larynx by Dr. R. Brooks Hunt, Richmond; The Retinal Venous Obstructive Syndrome by Dr. Wise; Otolaryngologic Problems by Dr. Kuhn; Experience with Anterior Chamber Lenses by Dr. DuPont Guerry, III, Richmond, and Dr. Wolfgang A. Lieb, Richmond, invited guest; and Emotional Influences on Vocal Cord Abuse in the Post-Operative Patient by Dr. Neil Callahan, Norfolk.

Richmond Academy of Medicine.

The J. Shelton Horsley Memorial Lecture was held at the Academy on April 22nd. The speaker was Dr. Frank B. Berry, Assistant Secretary of Defense, and past Professor of Clinical Surgery at Columbia University. His topic was Problems Confronting Medicine Today.

This was the 12th annual J. Shelton Horsley Memorial Lecture. The Lectureship was established in 1947 and each year presents an outstanding speaker in the field of surgery.

Virginia State Orthopaedic Society.

The annual spring scientific meeting of this Society was held in Charlottesville, March 28th and 29th. Dr. J. Hamilton Allan, president, presided.

Dr. Otto Aufranc, Boston, was guest lecturer and spoke on the Vitallium Cup Arthroplasty. Others on the program were Dr. David Strider who spoke on Vertebra Plana; Dr. Brant Lipscomb on Management of Knee Injuries in Athletes; Dr. David Fairman on Chemopallidectomy in Cerebral Palsy; Dr. E. D. Vere Nicoll on Factors Influencing Healing Time in Fractures of the Tibia; Dr. Robert Kindred on Bone Tumors; and Dr. Charles Frankel on Whiplash Injuries.

Dr. Richard H. Fisher, Roanoke, is secretary-treasurer of this Society.

News Notes....

New Members.

Since the list published in the May issue of the Monthly, the following new members have been admitted into The Medical Society of Virginia:

Robert L. Bregman, M.D., Alexandria
Baxter Hayes Byerly, M.D., Danville
Robert Eugene Byrne, M.D., Arlington
James Leonidas Camp, III, M.D., Charlottesville
Henry Francis Capozzella, M.D., Arlington
Ludovic J. DeVocht, M.D., Alexandria
Merle W. Eshleman, M.D., Harrisonburg
Louis Farano, M.D., Norfolk
Samuel Alan Graham, Jr., M.D., Portsmouth
Rudolf Hoene, M.D., Charlottesville
Mary Lou Hoover, M.D., Fishersville
Robert B. McEntee, M.D., Richmond
Simon Paluch, M.D., Springfield
Albert John Russo, M.D., Salem
Joseph Marion Straughan, M.D., Wise
Louis Howard Williams, M.D., Richmond

Sixty Years of Practice for Dr. McKee.

Dr. Thomas K. McKee, Saltville, completed sixty years of practice on April 29th and states he intends to "practice as long as I can get to the office." He has been practicing in Saltville since 1912, having begun his practice at St. Clair's Bottom and Chilhowie. Dr. McKee began his practice on horseback, then bought a motorcycle which left him with the firm impression that horses were much safer. He bought his first auto in 1912 but the horse was still the faithful standby until 1920 when the auto took over for good. Dr. McKee feels that he knows every pigpath in the western end of Smyth County and he has delivered more than 4,600 babies.

Dr. McKee has five children, four sons and a daughter. Two of his sons have followed in his footsteps—John B. is located in Winchester and Thomas P. heads his own hospital in Johnson City, Tenn.

Dr. William Parson,

University of Virginia, was guest speaker at the annual meeting of the Virginia Dietetic Association in Staunton. His subject was "How Much is Enough".

Dr. John M. Meredith,

Medical College of Virginia, Richmond, was a guest speaker at the Annual Meeting of the South Carolina Medical Association at Myrtle Beach, May 13-15. His subject was Chemopallidectomy for Relief of Parkinson's Disease with Remarks on Selection of Cases for Operation and Improvements in Surgical Techniques.

Senior Day Program.

The Public Relations Committee of The Medical Society of Virginia sponsored a Senior Day Program at the Medical College of Virginia on April 23rd. Dr. Thomas W. Murrell, president-elect of the Richmond Academy of Medicine, presided. A film "Someone is Always Watching", prepared by the New York State Department of Health was shown, and Dr. Guy W. Horsley, Richmond, gave an address on The Art of the Practice of Medicine.

Cocktails and dinner were served, and the group was addressed by Dr. Harry C. Bates, Jr., president of The Medical Society of Virginia, on The Doctor as a Citizen.

The Committee was pleased with the reception accorded this first program and hope similar programs may be presented annually for senior medical students at both the University of Virginia and the Medical College of Virginia.

Dr. S. Randolph Penn,

Waynesboro, was one of six special guests at the three-day convention in New Orleans of the Southern Society of Clinical Surgeons.

Dr. John W. Hooker,

Danville, addressed the Lions Club at a recent meeting. He traced the history of blood transfusion and pointed out the need of an adequate up-to-date blood bank in Danville.

Department Shift at Medical College of Virginia.

The department of gynecology at the Medical College of Virginia has been transferred from the department of surgery to that of obstetrics. This was made in accordance with a program of the American Board of Obstetrics and Gynecology. All but two medical colleges in the United States have made this change. Dr. Randolph H. Hoge will remain as chief of gynecology.

Dr. A. Ray Dawson

Has been elected president of the Richmond Tuberculosis Association.

Dr. Mason Romaine,

Richmond, addressed the annual meeting of the Virginia Dietetic Association. He spoke on the meat inspection program.

Dr. Broadus F. Sowell

Reported for duty as director of the Brunswick-Greensville-Mecklenburg Health District on May 1st, following three months inservice training in selected local health departments.

Dr. Jean Pearson

Reported for duty as assistant director of the Fairfax-Falls Church Health District on May 1st, following three months inservice training in selected local health departments.

Dr. E. G. Gill,

Roanoke, served as moderator for a symposium on Cataract Surgery given by the New York Eye and Ear Infirmary Alumni Association April 21-24.

Endowed Professorship at University.

A campaign to establish an endowed professorship in internal medicine at the University of Virginia School of Medicine, with Dr. H. B. Mulholland as the first incumbent, has been announced. After Dr. Mulholland's retirement in 1962, the department of internal medicine will continue to benefit in perpetuity.

This is the first major effort of the University of Virginia School of Medicine to supplement State appropriations with private endowments following the establishment of the Stephen H. Watts Chair of Surgery in 1953 under the will of the late Dr. Stephen H. Watts.

The campaign for funds to establish the endowed chair will be conducted by the University of Virginia Alumni Fund. Until the required amount of $500,000 is reached, the income from the fund may be used for the urgent needs of the department of internal medicine or it may be added to the growing principal of the fund. Contributions are deductible for income tax purposes.

Dr. David M. Hume,

Medical College of Virginia, Richmond, was guest speaker at the annual meeting of the Florida Medical Association held May 10-14 in Miami Beach. His topic was Organ Transplantation—Past, Present and Future. He also moderated a panel on recent advances in modern methods of diagnosis and therapy.

Smoking and the Eye

Smoking makes the blood vessels of the hands and feet constrict, and it has been assumed that it also causes the vessels of the eye to constrict. However, a recent study has shown that "this is not necessarily true."

The study, made by three San Francisco doctors, showed that smoking constricts the retinal blood vessels in a few people, changes them not at all in most, and may actually dilate them on rare occasions.

The explanation to these apparently inconsistent results probably lies in the fact that nicotine "is a drug with multiple actions and varying effects," the doctors said in the April Archives of Ophthalmology, published by the American Medical Association.

The authors are Drs. Jerome W. Bettman, Victor Fellows, and Peter Chao of the division of ophthalmology, Stanford Medical School.

The Gill Memorial Eye, Ear and Throat Hospital,

Roanoke, held its annual Sight Conservation Conference on May 8th. Guest speaker was Dr. Franklin Foote, Executive Director for the National Society for the Prevention of Blindness.

Location Wanted.

Dermatologist, Virginia license, available in 1959, seeks opportunity to locate in Virginia. Write #425, care the Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Virginia. (*Adv.*)

Obituaries . . . .

Dr. William Meredith Winn,

Prominent physician of Clarksville, died April 20th in Atlantic City, where he had been visiting for a week. He was sixty-nine years of age and a graduate of the Medical College of Virginia in 1911. Dr. Winn had practiced in Mecklenburg County for forty-seven years and was active in civic affairs of the county. He had been a member of The Medical Society of Virginia since 1937.

His wife and a daughter survive him.

Dr. John Meriwether Hurt,

Well-known physician of Blackstone, died April 19th, at the age of fifty. He was a graduate in medicine from the University of Virginia in 1933 and had practiced in Blackstone since 1934. During World War II, Dr. Hurt was the only physician practicing in Blackstone when the population soared to about 20,000 because of the activation of nearby Camp Pickett. He had been a member of The Medical Society of Virginia for twenty-three years.

His wife, two sons and a daughter survive him. A brother is Dr. Holcombe H. Hurt of Lynchburg.

Dr. Vann

Dr. Foy Vann, noted orthopedic surgeon, prominent and beloved member of this society, and life-time friend of crippled children, died at his residence, March 15, 1958. He was the son of Albert C. and Anne Newsome Vann, and was born in Union, North Carolina, October 18, 1881.

Dr. Vann was a graduate of the Medical College of Virginia in 1905, and interned at the Norfolk General Hospital, after which he engaged in the private practice of medicine in Whaleyville. He later entered the New York Orthopedic Hospital for post-graduate work in orthopedics, and after finishing there, studied his specialty in Boston.

In 1919, he began the practice of orthopedics in Norfolk, the pioneer in this specialty in Tidewater Virginia. During his long career here, he was an active member of the staff of the Norfolk General, DePaul, Leigh Memorial, Norfolk Community, Maryview and King's Daughters' Hospitals. He was past president of the staff at Norfolk General and of St. Vincent's Hospitals. For many years he was consulting orthopedist at the Public Health Hospital, and at the Kecoughtan Veteran's Facility, Hampton. It will be impossible to estimate the time and effort that Dr. Vann devoted during his years of activity in the clinics of these hospitals, to the care of indigent and underprivileged patients.

From 1928 until his last illness, Dr. Vann held the Newport News Kiwanis Club's Clinic for crippled children, and no other of his many endeavors was quite so close to his heart. Flood, hurricanes, fire nor sickness could keep him away from this appointment, and it is said that he never missed a day of attendance. The records show that during the years he was active in this work, over 7,500 children received treatment, and the memory of this great humanitarian is held in reverence not only by the members of the Kiwanis Club, but by thousands of the citizens of our neighboring city.

During World War II, Dr. Vann carried a heavy professional load as the only orthopedic consultant in the Tidewater area, but found the time to serve actively as an examining physician for the Draft Board, an assignment that required working late into the night.

He was a charter member of the American Academy of Orthopedics Surgeons, a member of The Medical Society of Virginia, American Medical Association, the Seaboard Medical Association, past president of the Norfolk County Medical Society, and the first president of the Tidewater Orthopedic Society. He was an honorary member of the Newport News Kiwanis Club and the Virginia Fox Hunters Association.

Dr. Vann will be remembered as a quiet, soft spoken gentle man, whose life was dedicated to his profession. His legion of friends held him in high esteem as a most enjoyable companion, a gifted raconteur, a man who had a tolerant understanding of human frailties, and therefore respected and loved his fellow man.

The medical profession has lost a gifted and valued member. He will be missed by those who have been helped by his knowledge and skill, and his friends to whom he was always loyal and so ready to lend a helping hand.

THEREFORE, BE IT RESOLVED, that the members of the Norfolk County Medical Society extend their deepest and most sincere sympathy to the family of our departed colleague.

BE IT FURTHER RESOLVED, that this resolution be recorded in the minutes of the Norfolk County Medical Society and copies sent to the family and to the Virginia Medical Monthly.

M. S. FITCHETT
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The State Board of Medical Examiners of Virginia

The next meeting of the Virginia Board of Medical Examiners will be held in the Richmond Hotel, Richmond, Virginia, June 11, 1958. The examinations will be held in the same hotel June 12th to 14th, inclusive. All applications and other documents pertaining to the examinations or to matters to be discussed by the Board must be on file in the Secretary's office on or before May 20, 1958. The Secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.

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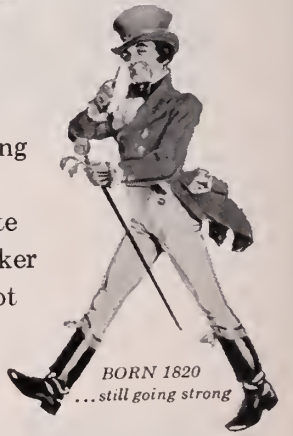
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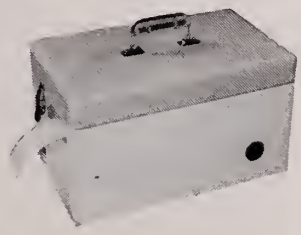


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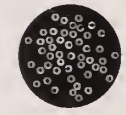
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1. Russek, H. I.: Postgrad. Med. *19*:562 (June) 1956.

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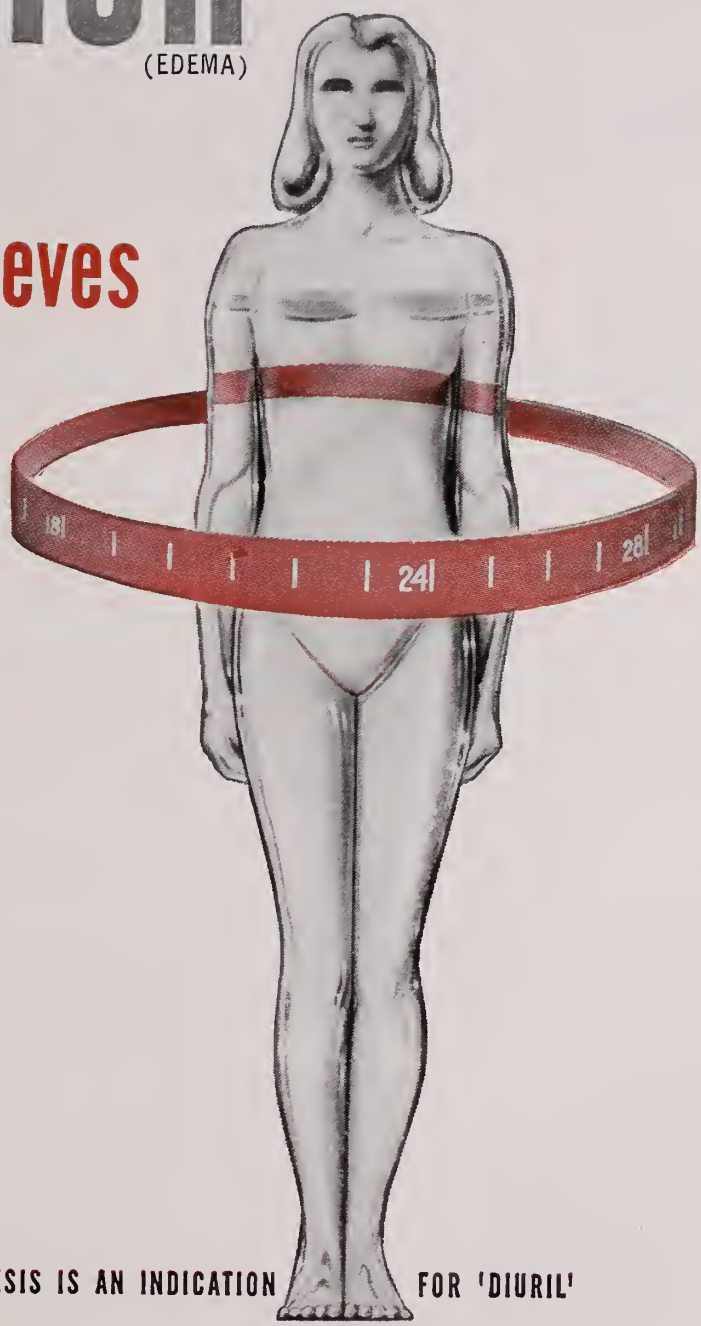
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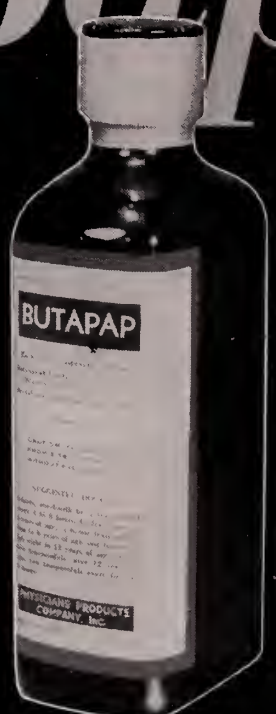
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(1) Hagedorn, A. B.: Proc. Staff Meet. Mayo Clin. **32**:705 (Dec. 11) 1957.
(2) Best, W. R.; Louis, J., and Limarzi, L. R.: M. Clin. North America (Jan.) 1958, p. 3.

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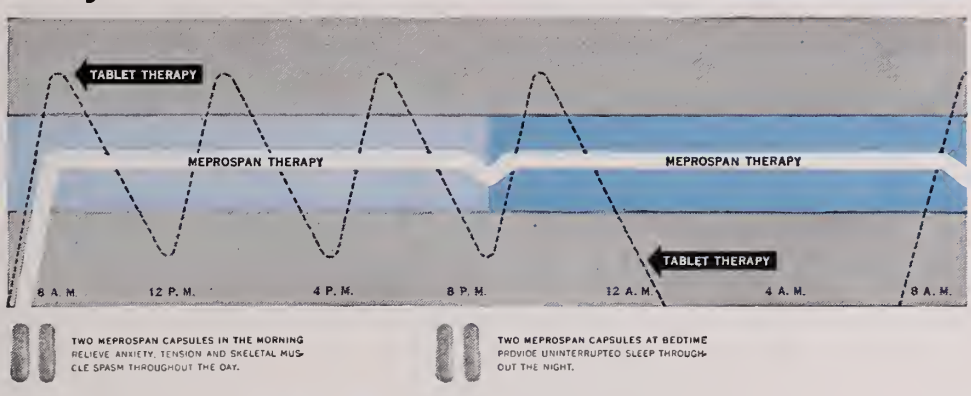
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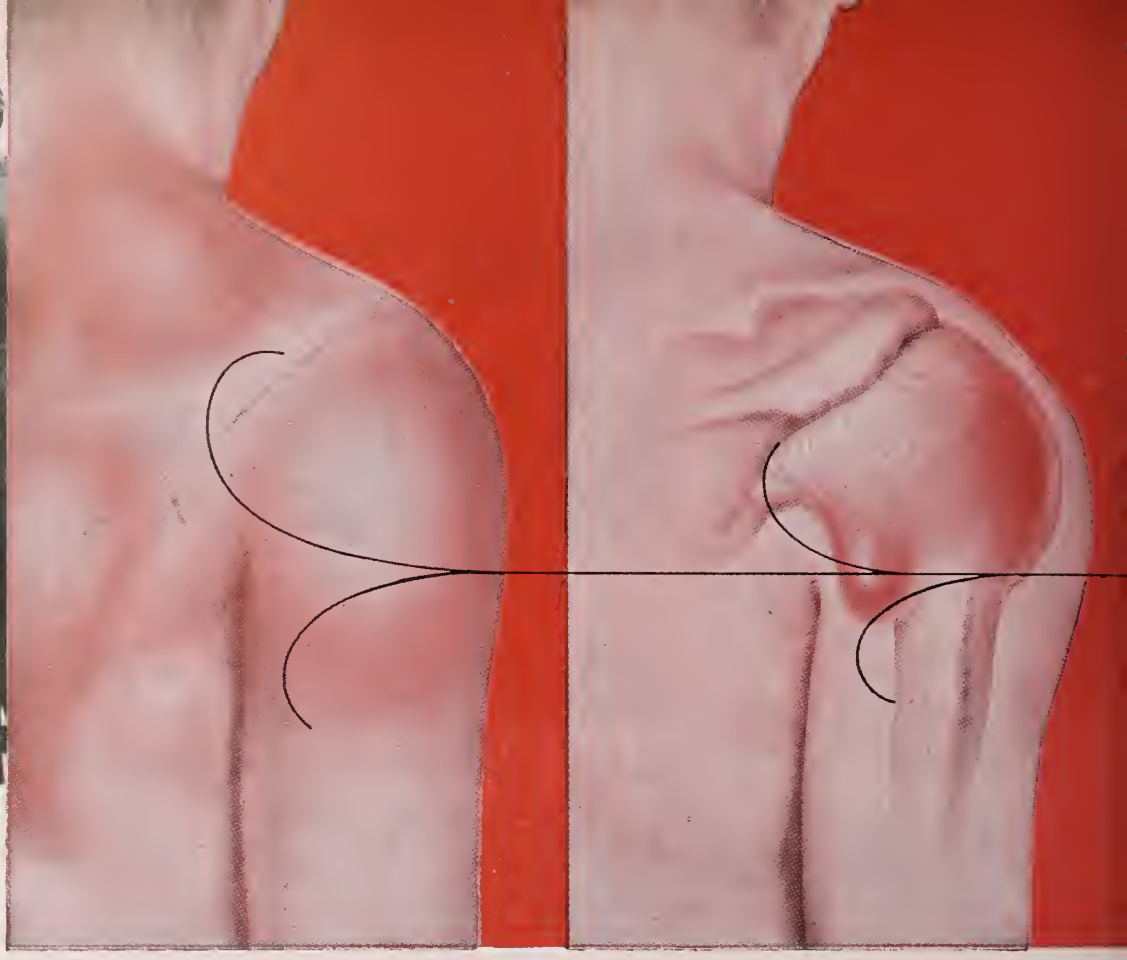
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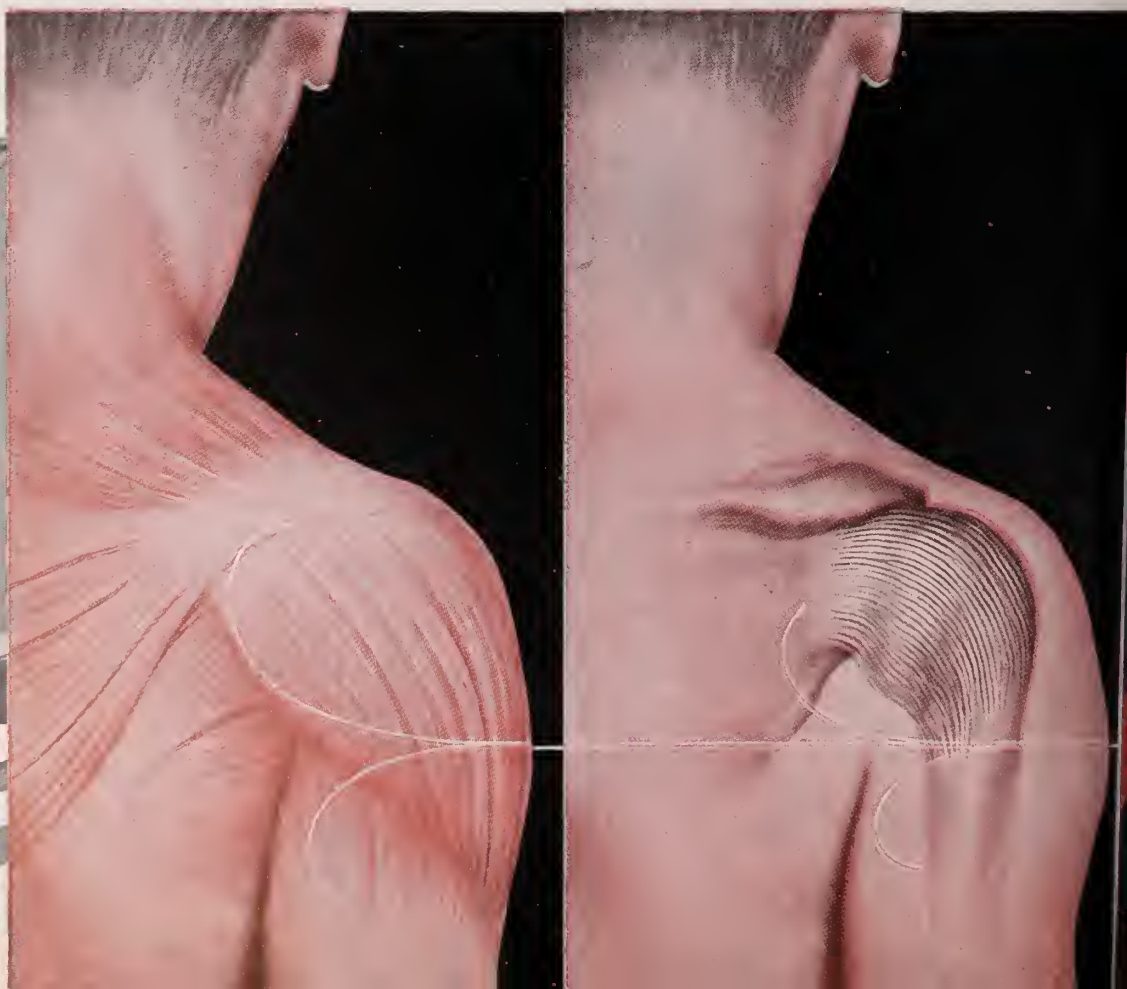
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1. Comroe's Arthritis: Hollander, J. L., p. 149 (Fifth Edition, Lea & Febiger, Philadelphia, Pa. 1953).
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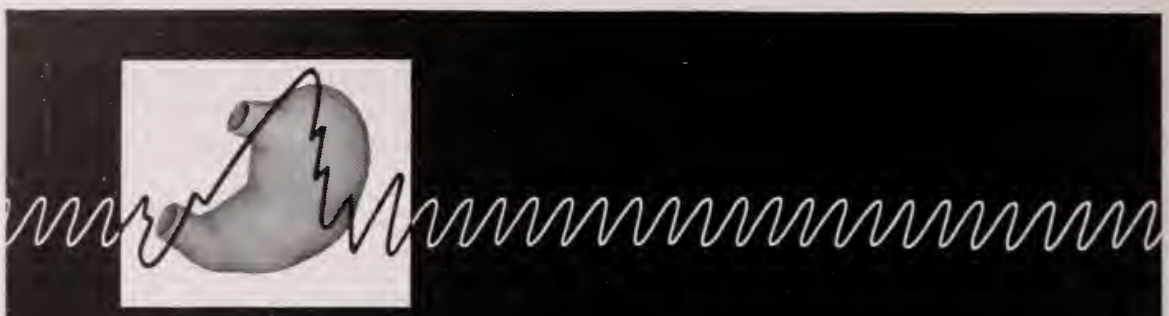
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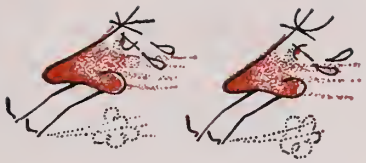
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running noses . . .



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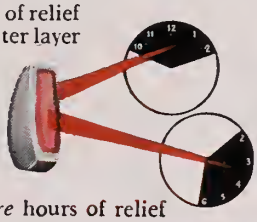
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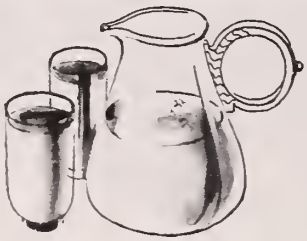
Vegetables



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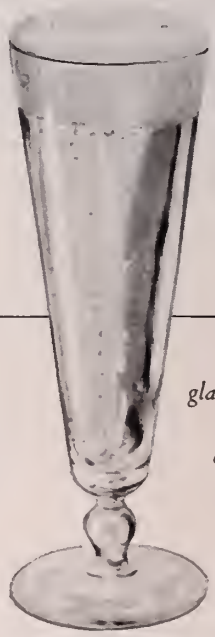
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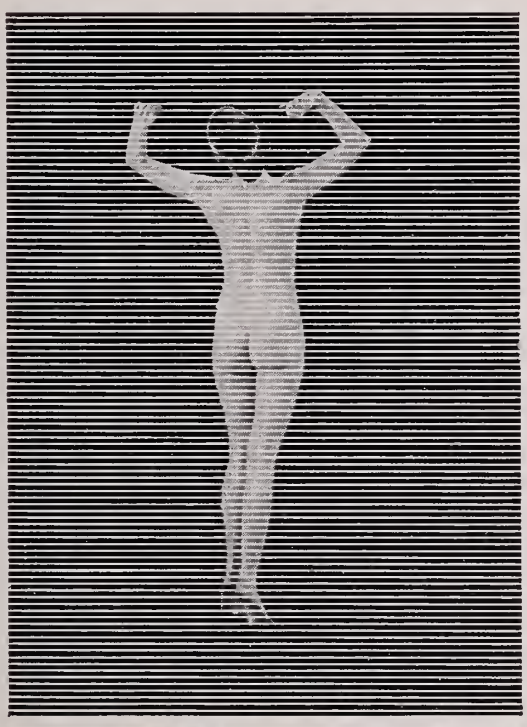
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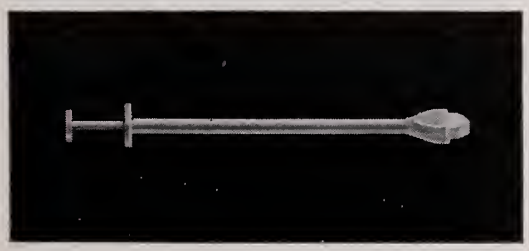
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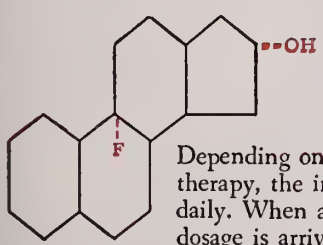
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Depending on the acuteness and severity of the disease under therapy, the initial dosage of ARISTOCORT is usually from 8 to 20 mg. daily. When acute manifestations have subsided, maintenance dosage is arrived at gradually, usually by reducing the total daily dosage 2 mg. every 3 days until the smallest dosage has been reached which will suppress symptoms.

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ARISTOCORT is available in 2 mg. scored tablets (pink), bottles of 30; and 4 mg. scored tablets (white), bottles of 30 and 100.

Lederle LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK

Faster rehabilitation

Joint inflammation and muscle spasm are the two elements most responsible for disability in rheumatic-arthritic disorders—and MEPROLONE is the one agent that treats both.

MEPROLONE suppresses the inflammatory process and simultaneously relieves aching and stiffness caused by muscle spasm, to provide greater therapeutic benefits and a shorter rehabilitation period than any single antirheumatic-antiarthritic agent.

MEPROLONE-2 is indicated in cases of sev
involvement, yet often leads to a reduction
steroid dosage because of its muscle-relax
action. When involvement is only moderat
severe or mild, MEPROLONE-1 may be indica

SUPPLIED: Multiple Compressed Tablets
three formulas: MEPROLONE-2—2.0 mg. pr
nisolone, 200 mg. meprobamate and 200
dried aluminum hydroxide gel (bottles of 1
MEPROLONE-1 supplies 1.0 mg. prednisol
in the same formula as MEPROLONE-2 (b
ties of 100). MEPROLONE-5—5.0 mg. predni
lone, 400 mg. meprobamate and 200 mg. d
aluminum hydroxide gel (bottles of 30).

a

Because muscles move joints, both muscle spasm and joint inflammation must be considered in treating the rheumatic-arthritic patient . . .



MERCK SHARP & DOHME Division of MERCK & CO., INC., Philadelphia 1, Pa.

heumatoid Arthritis

ole compressed tablets

MEPROLONE®

RST MEPROBAMATE-PREDNISOLONE THERAPY



b

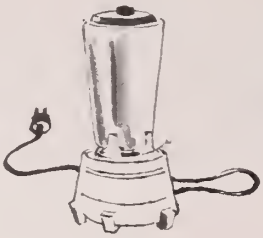
MEPROLONE is the one antirheumatic-antiarthritic that exerts a simultaneous action to relax muscles in spasm and to suppress joint inflammation...

c

Therefore, MEPROLONE does more than any single agent to help the physician shorten the time between disability and employability.



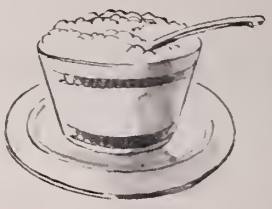
EPROLONE is a trade-mark of Merck & Co., Inc.



Blender



Milk



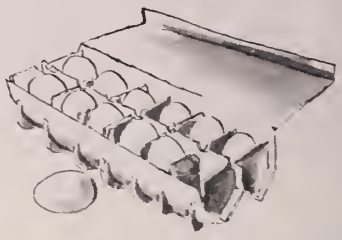
Cottage Cheese



Tomato Juice



Strained Carrots



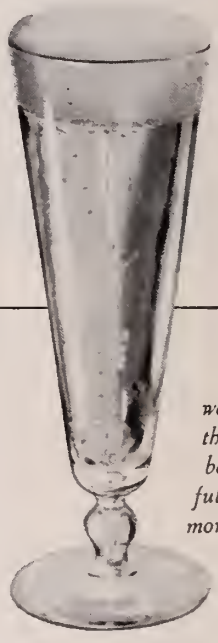
Eggs



Fruit Drinks



Lemon and Mint



With a blender or an egg beater almost any food can be used

... and may we remind you that a glass of beer can make full-liquid diets more palatable?

The Full-Liquid Diet

● Strained chicken in milk makes "bisque"—in tomato juice it's "creole." Your patient may like cottage cheese whipped into milk flavored with chocolate and mint. Strained carrots go in milk flavored with nutmeg or pineapple juice. An egg or skim milk powder adds protein.

Strained fruits in fruit juices do well with a squeeze of lemon or a touch of mint. Bright colored drinks look good in clear glass—pale ones in gayly painted glasses.

Of course, only you can tell just which food your patient can have. And if you feel that a glass of beer* is acceptable in his specific condition, it may provide an incentive he needs to stay within the limits you set.

*pH 4.3; 104 calories/8-oz glass (Average of American Beers)

United States Brewers Foundation
Beer—America's Beverage of Moderation

If you'd like reprints of this and 11 other dietary suggestions, please write United States Brewers Foundation, 535 Fifth Avenue, New York 17, N. Y.

Now—the most widely prescribed tranquilizer[1] in sustained release capsules

Meprospan*

meprobamate (Miltown®) capsules



q. 12 h.

Two capsules on arising **last all day**
Two capsules at bedtime **last all night**
relieve nervous tension on a *sustained* basis, without between-dose interruption

"The administration of meprobamate in sustained action form [Meprospan] produced a more uniform and sustained action . . . these capsules offer effectiveness at reduced dosage."[2]

Dosage: 2 Meprospan capsules q. 12 h.
Supplied: 200 mg. capsules, bottles of 30.

1. Meprobamate is more widely prescribed than any other tranquilizer. Source: Independent research organization; name on request.
2. Baird, H. W., III: A comparison of Meprospan (sustained action meprobamate capsule) with other tranquilizing and relaxing agents in children. Submitted for publication, 1958.

Literature and samples on request

WALLACE LABORATORIES, *New Brunswick, N. J.*
who discovered and introduced Miltown®

*TRADE-MARK CME-7326

when you treat hypertensive patients

double duty RAUDIXIN

Squibb Standardized Whole Root Rauwolfia Serpentina

is the solid base line for successful therapy



Raudixin helps you relieve pressures in your patients

Raudixin "lowers blood pressure and slows the pulse rate much more efficiently than the barbiturates. . . . It is not habit-forming and is synergistic with all other known hypotensive drugs."*

Raudixin helps you relieve pressures on your patients

Raudixin "relieves anxiety and tension, particularly the tension headache of the mild hypertensive patient, better than any other drug."*

RAUDIXIN..."is the best symptom reliever."*

In mild to moderate cases, Raudixin is frequently sufficient.

Base line therapy with Raudixin permits lower dosage of more toxic agents. The incidence and side effects of these agents are minimized. Diuretics often potentiate the antihypertensive effect of Raudixin.

*Finnerty, F. A. Jr.: New York State J. Med. 57:2957 (Sept. 15) 1957.

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douching
that is
physiologically
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Meta Cine

vaginal douche powder

Meta Cine represents a carefully designed formula which provides the physician with a vaginal douche preparation which safely and effectively maintains a clean healthy vagina.

Meta Cine is a combination of several ingredients clinically established as valuable in promoting proper vaginal hygiene. Diluted for use, Meta Cine possesses the desired pH (3.5); contains the mucus digestant, papain, which dissolves mucus plugs and coagulum; contains lactose to promote growth of desirable döderlein bacilli, and methyl salicylate for soothing stimulation of circulation within the vaginal walls.

Its pleasant, deodorizing fragrance also meets the esthetic demands of your patients.

Meta Cine is promoted exclusively to the medical profession, and recommends itself as your preparation of choice for patients who might otherwise indulge in unsupervised self-medication with potentially damaging nonphysiologic douches.

Supplied in 8-oz. containers. 2 teaspoonfuls in 2 quarts of warm water, douche as prescribed.

Printed douching instructions for patients available upon request.



BRAYTEN Pharmaceutical Company • *Chattanooga 9, Tennessee*

Mazola® Corn Oil...a palatable food effective in the management and control of serum cholesterol levels

Extensive clinical tests show that when the diet contains an adequate amount of Mazola Corn Oil, serum cholesterol levels tend to be normal... high blood cholesterol levels are lowered, normal levels maintained.

Fortunately for both physician and patient, Mazola Corn Oil is not only rich in unsaturated fatty acids, it is also a delicious food. It becomes an enjoyable and normal part of the patient's daily meals—no complicated or special diet is required.

Here is a therapy easy for you to prescribe, easy and pleasant for your patients to follow.

Nutritional authorities generally recommend that fats should provide no more than 30% of the total calories. In cholesterol-lowering diets from one-third to one-half of these fats should be unsaturated, such as in Mazola Corn Oil.

IN COOKING OR SALADS

Mazola Corn Oil is a superlative cooking oil as well as a delicious salad oil. Adequate amounts can be eaten daily—in a wide variety of salad dressings and in a great number of fried and baked foods.

MOST EFFECTIVE

Pure, clear, bland and odorless. Mazola Corn Oil is stable and dependable, providing the full measure of cholesterol-lowering unsaturated fatty acids characteristic of corn oil.

ECONOMICAL

Mazola Corn Oil is sold in grocery stores throughout the country, is available everywhere. Its comparatively low cost makes it as economical as it is effective.

CORN PRODUCTS
REFINING COMPANY



MAZOLA* CORN OIL is a rich source of unsaturated fatty acids. It can form a regular part of the diet without major changes in eating habits to provide an effective unsaturated oil as a part of the daily meals.

EACH TABLESPOONFUL OF MAZOLA CORN OIL PROVIDES NOT LESS THAN:

Linoleic Acid	7.4 Gm.
Sitosterols	130 mg.
Natural Tocopherols	15 mg.

TYPICAL AMOUNTS PER DIET

For a 3600 calorie diet	3 tablespoonsful
For a 3000 calorie diet	2.5 tablespoonsful
For a 2000 calorie diet	1.5 tablespoonsful

*Reg. U. S. Pat. Off.

TAKE A NEW LOOK AT FOOD ALLERGENS*–TAKE A LOOK AT NEW DIMETANE

*Sea food—source of highly potent allergens. Typical are: lobster; tuna; sturgeon roe; fish oil used to prepare leather, chamois, soaps; cuttlefish bone for polishing material and tooth powder; glues made from fish products.

In a recent 140-patient study[1] DIMETANE gave "more relief or was superior to other antihistamines," in 63, or 45% of a group manifesting a variety of allergic conditions. Gave good to excellent results in 87%. Was well tolerated in 92%. Only 11 patients (8%) experienced any side reactions and 5 of these could not tolerate any antihistamines.

1. Thomas, J. W.: Ann. Allergy *16*:128, 1958

DIMETANE Extentabs (12 mg. each, coated) provide antihistamine effects daylong or nightlong for 10-12 hours. Tablets (4 mg. each, scored) or pleasant-tasting Elixir (2 mg./5 cc.) may be prescribed t.i.d. or q.i.d., or as supplementary dosage to Extentabs in acute allergic situations. A. H. ROBINS CO., INC., Richmond 20, Virginia. Ethical Pharmaceuticals of Merit Since 1878.

Robins

Dimetane® (PARABROMDYLAMINE MALEATE)

EXTENTABS® • TABLETS • ELIXIR



Investigator

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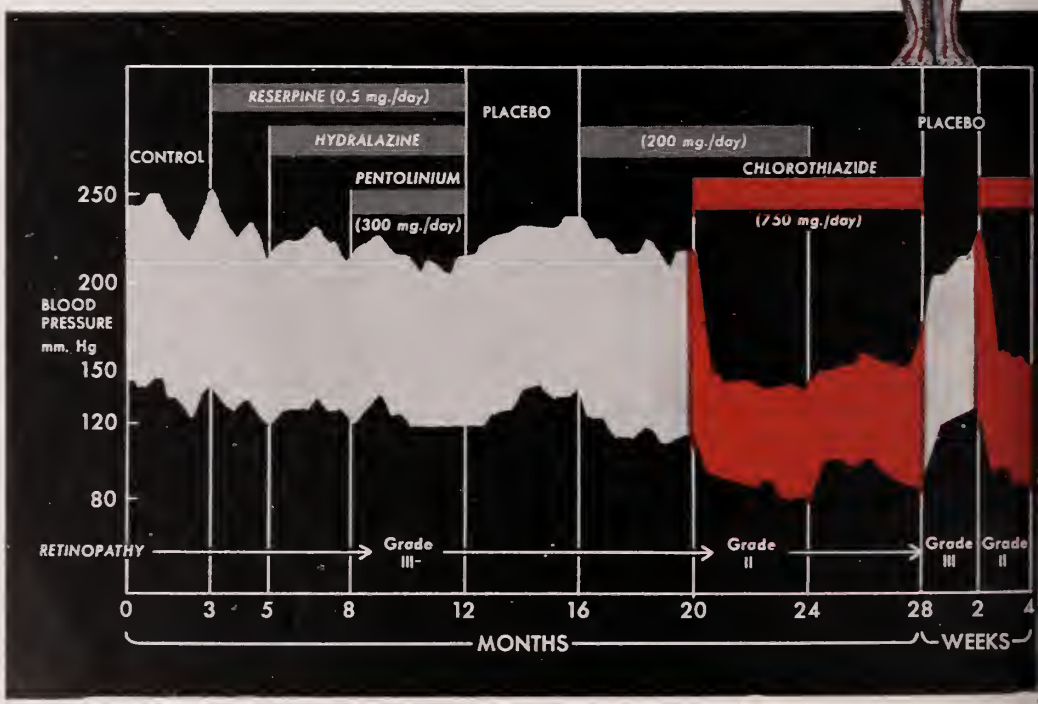
Wilkins, R. W.: New England J. Med. 257:1026, Nov. 21, 1957.

"Chlorothiazide added to other antihypertensive drugs reduced the blood pressure in 19 of 23 hypertensive patients." "All of 11 hypertension subjects in whom splanchnicectomy had been performed had a striking blood pressure response to oral administration of chlorothiazide." ". . . it is not hypotensive in normotensive patients with congestive heart failure, in whom it is markedly diuretic; it is hypotensive in both compensated and decompensated hypertensive patients (in the former without congestive heart failure, it is not markedly diuretic, whereas in the latter in congestive heart failure, it is markedly diuretic). . . ."



Freis, E. D., Wanko, A., Wilson, I. H. and Parrish, A. E.: J.A.M.A. 166:137, Jan. 11, 1958.

"Chlorothiazide (maintenance dose, 0.5 Gm. twice daily) added to the regimen of 73 ambulatory hypertensive patients who were receiving other antihypertensive drugs as well caused an additional reduction [16%] of blood pressure." "The advantages of chlorothiazide were (1) significant antihypertensive effect in a high percentage of patients, particularly when combined with other agents, (2) absence of significant side effects or toxicity in the dosages used, (3) absence of tolerance (at least thus far), and (4) effectiveness with simple 'rule of thumb' oral dosage schedules."



In "Chlorothiazide: A New Type of Drug for the Treatment of Arterial Hypertension," Hollander, W. and Wilkins, R. W.: Boston Med. Quart. 8: 1, September, 1

MERCK SHARP & DOHME Division of MERCK & CO., Inc., Philadelphia 1, Pa.

effectiveness of 'DIURIL'
(CHLOROTHIAZIDE)

in

hypertension

as simple as 1-2-3

1 **INITIATE THERAPY WITH 'DIURIL'.** 'DIURIL' is given in a dosage range of from 250 mg. twice a day to 500 mg. three times a day.

2 **ADJUST DOSAGE OF OTHER AGENTS.** The dosage of other antihypertensive medication (reserpine, veratrum, hydralazine, etc.) is adjusted as indicated by patient response. If the patient is established on a ganglionic blocking agent (e.g., 'INVERSINE') this should be continued, but the total daily dose should be immediately reduced by as much as 25 to 50 per cent. This will reduce the serious side effects often observed with ganglionic blockade.

3 **ADJUST DOSAGE OF ALL MEDICATION.** The patient must be frequently observed and careful adjustment of all agents should be made to determine optimal maintenance dosage.

SUPPLIED: 250 mg. and 500 mg. scored tablets 'DIURIL' (chlorothiazide); bottles of 100 and 1,000.

'DIURIL' is a trade-mark of Merck & Co., Inc.

Both, more trouble-free management of hypertension with 'DIURIL'



running noses . . .



and other hay fever symptoms

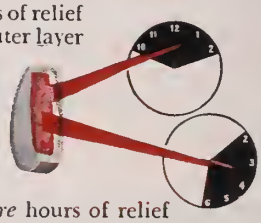
TRIAMINIC stops rhinorrhea, congestion and other distressing symptoms of summer allergies, including hay fever. Running nose, watery eyes and sneezing are best relieved by antihistamine *plus* decongestant action – systemically – with TRIAMINIC.

This new approach frequently succeeds where less complete therapy has failed. It is not enough merely to use histamine antagonists; ideally, therapy must be aimed also at the congestion of the nasal mucosa. Triaminic provides such effective combined therapy in a single timed-release tablet.

TRIAMINIC brings relief in minutes—lasts for hours. Running noses stop, congested noses open—and stay open for 6 to 8 hours.

Triaminic provides around-the-clock freedom from allergic congestion with just one tablet t.i.d. because of the special timed-release design.

first—3 to 4 hours of relief from the outer layer



then—3 to 4 *more* hours of relief from the inner core

Dosage: One tablet in the morning, mid-afternoon and at bedtime. In postnasal drip, one tablet at bedtime is usually sufficient.

Each timed-release TRIAMINIC Tablet contains:

Phenylpropanolamine HCl	50 mg.
Pheniramine maleate	25 mg.
Pyrilamine maleate	25 mg.

TRIAMINIC FOR THE PEDIATRIC PATIENT

TRIAMINIC Juvelets*, providing easy-to-swallow half-dosages for the 6- to 12-year-old child, with the timed-release construction for prolonged relief.

*Trademark

TRIAMINIC Syrup, for those children and adults who prefer a liquid medication. Each 5 ml. teaspoonful is equivalent to ¼ Triaminic Tablet or ½ Triaminic Juvelet.

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USE 'POLYSPORIN'®

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POLYMYXIN B—BACITRACIN OINTMENT

to insure broad-spectrum therapy with minimum allergenicity

For topical use: in ½ oz. and 1 oz. tubes.
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with new

CARTRAX*

PETN + ATARAX®

(PENTAERYTHRITOL TETRANITRATE) (BRAND OF HYDROXYZINE)

why PETN? *For cardiac effect:* PETN is ". . . the most effective drug currently available for prolonged prophylactic treatment of angina pectoris."[1] Prevents about 80% of anginal attacks.

why ATARAX? *For ataractic effect:* One of the most effective—and probably the safest—of tranquilizers, ATARAX frees the angina patient of his constant tension and anxiety. Ideal for the on-the-job patient. And ATARAX has a unique advantage in cardiac therapy: it is anti-arrhythmic and non-hypotensive.

why combine the two? *For greater therapeutic success:* In clinical trials, CARTRAX was demonstrably superior to previous therapy, including PETN alone. Specifically, 87% of angina patients did better. They were shown to suffer fewer attacks . . . require less nitroglycerin . . . have increased tolerance to physical effort . . . and be freed of cardiac fixation.

1. Russek, H. I.: Postgrad. Med. *19*:562 (June) 1956.

Dosage and Supplied: Begin with 1 to 2 yellow CARTRAX "10" tablets (10 mg. PETN plus 10 mg. ATARAX) 3 to 4 times daily. When indicated this may be increased by switching to pink CARTRAX "20" tablets (20 mg. PETN plus 10 mg. ATARAX.) For convenience, write "CARTRAX 10" or "CARTRAX 20." In bottles of 100.

CARTRAX should be taken 30 to 60 minutes *before* meals, on a continuous dosage schedule. Use PETN preparations with caution in glaucoma.

ROERIG Rx

NEW YORK 17, NEW YORK
Division, Chas. Pfizer & Co., Inc.

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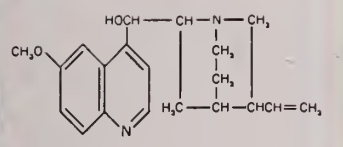
Progress in SYNTHETIC CHEMISTRY EQUALS Progress in CHEMOTHERAPEUTICS

"It has a high degree of clinical safety. . . It is considered to be the preferred antimalarial drug for treatment of disorders of connective tissue, because of the low incidence of gastrointestinal distress as compared to that with chloroquine phosphate."[1]

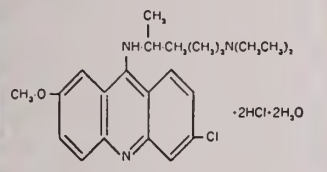
". . . Plaquenil is decidedly less toxic and better tolerated by the average patient, even in high dosage, than is chloroquine."[2]

". . . the least toxic of its class . . ."[3]

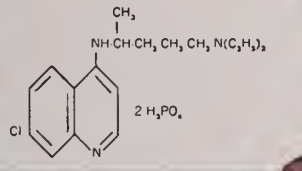
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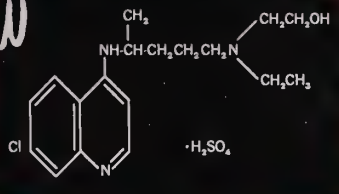
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ARALEN® PHOSPHATE



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Plaquenil® SULFATE

Remarkably effective in RHEUMATOID ARTHRITIS

SIDE EFFECTS MARKEDLY REDUCED

DOSE: **Initial** – 400 to 600 mg. (2 or 3 tablets) Plaquenil sulfate daily.
Maintenance – 200 to 400 mg. (1 or 2 tablets) daily.

SUPPLIED: Tablets of 200 mg., bottles of 100.

Write for Booklet

Winthrop LABORATORIES NEW YORK 6 N.Y.

A. L., Schuchter, S. L., and Harrison, J. W.: *Cleveland Clin. Quart.* 24:98, Apr., 1957.
A. C., and Alexander, L. J.: The Schoch section, *Bull. A. Mid. Dermatologists* 5:25, Nov., 1956.
Theodore: Arch. Dermat. 73:572, June, 1956.

Atabrine (brand of quinacrine), Aralen (brand of chlor... and Plaquenil (brand of hydro... trademark reg. U.S. Pat...



when eating moves outdoors . . .

CREMOSUXIDINE®

SULFASUXIDINE® SUSPENSION WITH KAOLIN AND PECTIN

CONTROLS "SUMMER COMPLAINT"

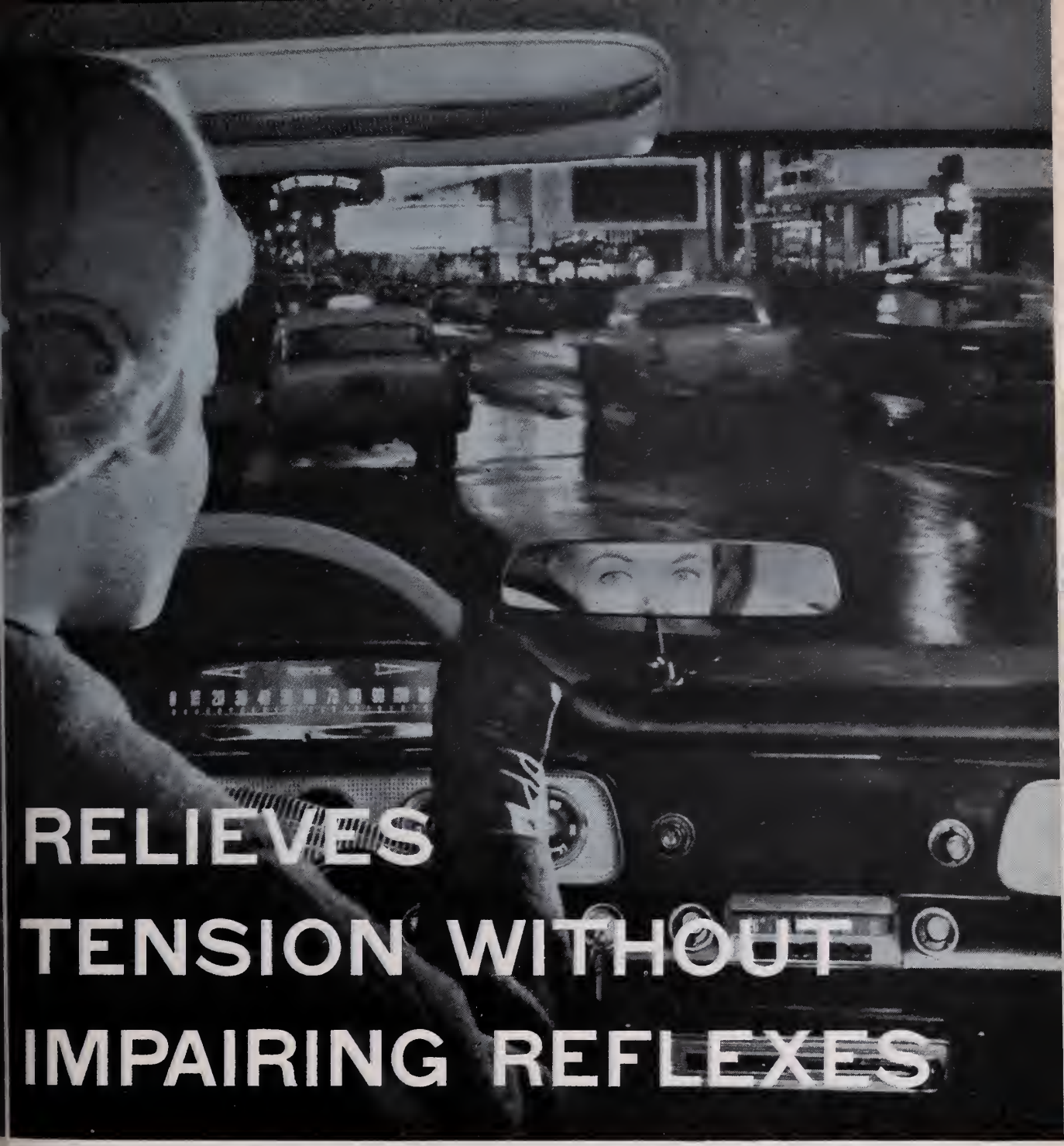
For people at work or on vacation, "summer complaint" is an annoying hazard of warm weather. Changes in routine or in eating or drinking habits can cause diarrhea and ruin summer days.

CREMOSUXIDINE gives prompt control of seasonal diarrhea by providing antibacterial and antidiarrheal benefit. It detoxifies intestinal irritants and soothes inflamed mucosa.

Chocolate-mint flavored CREMOSUXIDINE is so pleasant to take too!

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"Even in double the usual dosage, [Miltown] produces no behavioral toxicity in our subjects as measured by our tests of driving, steadiness, and vision."*

Relieves anxiety, tension and muscle spasm in everyday practice

- with unexcelled safety
- without impairing autonomic function

Miltown®

meprobamate (Wallace)

Usual Dosage:
One or two
400 mg. tablets t.i.d.

Supplied:
400 mg.
scored tablets,
200 mg.
sugar-coated
tablets,
bottles of 50.

*Marquis, D. G., Kelly, E. L., Miller, J. G., Gerard, R. W. and Rapoport, A.: Ann. New York Acad. Sc. 67: 701, May 9, 1957.

WALLACE LABORATORIES, *New Brunswick, N. J.*

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"Since we've had him on NEOHYDRIN he can walk without dyspnea. I wouldn't have believed it possible a month ago."

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TABLET

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BRAND OF CHLORMERODRIN

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Low Dosage KYNEX* for G.U. Infections

Sulfamethoxypyridazine Lederle



Unusual Antibacterial and Anti-infective Properties—More soluble in acid urine[1] . . . higher and better sustained plasma levels than any other known and useful antibacterial sulfonamide.[2]

Unprecedented Low Dosage—Less sulfa for the kidney to cope with . . . yet fully effective. A single daily dose of 0.5 to 1.0 Gm. maintains higher plasma levels than 4 to 6 Gm. daily of other sulfonamides—a notable asset in prolonged therapy.[2]

Dosage: The recommended adult dose is 1 Gm. (2 tablets) the first day, followed by 0.5 Gm. (1 tablet) every day thereafter, or 1 Gm. every other day for mild to moderate infections. In severe infections where prompt, high blood levels are indicated, the initial dose should be 2 Gm. followed by 0.5 Gm. every 24 hours.

KYNEX—WHEREVER SULFA THERAPY IS INDICATED

Tablets: Each tablet contains 0.5 Gm. (7½ grains) of sulfamethoxypyridazine. Bottles of 24 and 100 tablets.

Syrup: Each teaspoonful (5 cc.) of caramel-flavored syrup contains 250 mg. of sulfamethoxypyridazine. Bottle of 4 fl. oz.

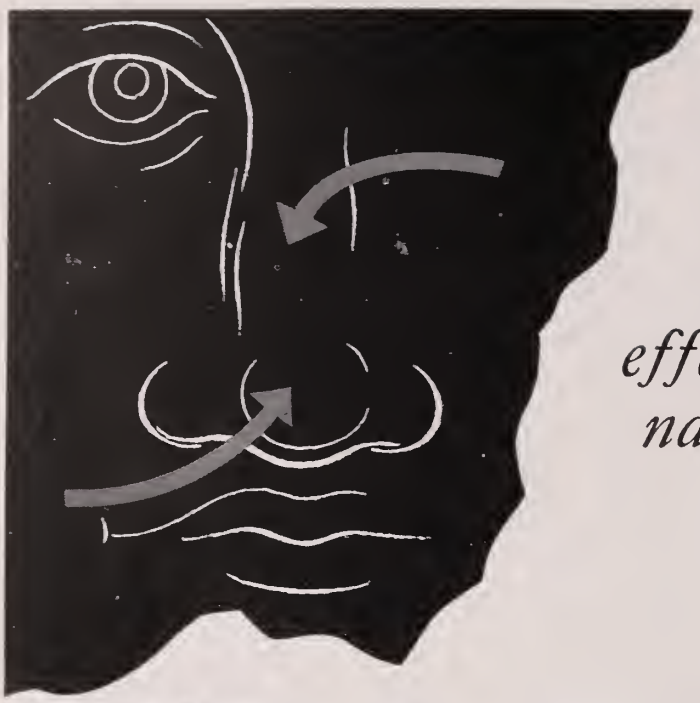
references:

1 Grieble, H.G., and Jackson, G.G.: Prolonged Treatment of Urinary-Tract Infections with Sulfamethoxypyridazine. *New England J. Med.* 258:1-7, 1958

2. Editorial: *New England J. Med.* 258:48-49, 1958.

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

*Reg. U. S. Pat. Off.



a more effective nasal decongestant

NADEC®
TABLETS

NADEC®
TDC (TIMED DISINTEGRATION CAPSULES)

for prompt, more complete, day-and-night relief in the
common cold
nasal allergies
sinusitis

Realistic dosage of the potent vasoconstrictor, phenylephrine hydrochloride, combined with the dependable antihistamine, pyrilamine maleate... for mutually enhancing, oral efficacy in clearing stuffy nose, combatting allergic turgidity, draining clogged sinuses, relieving postnasal drip.

patients breathe easier, feel so much more comfortable

NADEC provides	in each tablet	in each TDC*
Phenylephrine HCl U.S.P.	10 mg.	15 mg.
Pyrilamine Maleate U.S.P.	25 mg.	45 mg.

*Timed Disintegration Capsule affords up to 8 hours relief.

DOSAGE: 1 to 2 tablets p.c. Children 1 tablet, p.c. or 1 capsule b.i.d., 12 hours apart (adults)

SUPPLIED: Bottles of 100 green tablets or orange T.D. Capsules

Sample and literature from...

THE TILDEN COMPANY • New Lebanon, N. Y.
Oldest Manufacturing Pharmaceutical House in America • Founded 1824

See anybody here you know, Doctor?

I'm just too much

AMPLUS®
for sound obesity management
dextro-amphetamine plus vitamins
and minerals

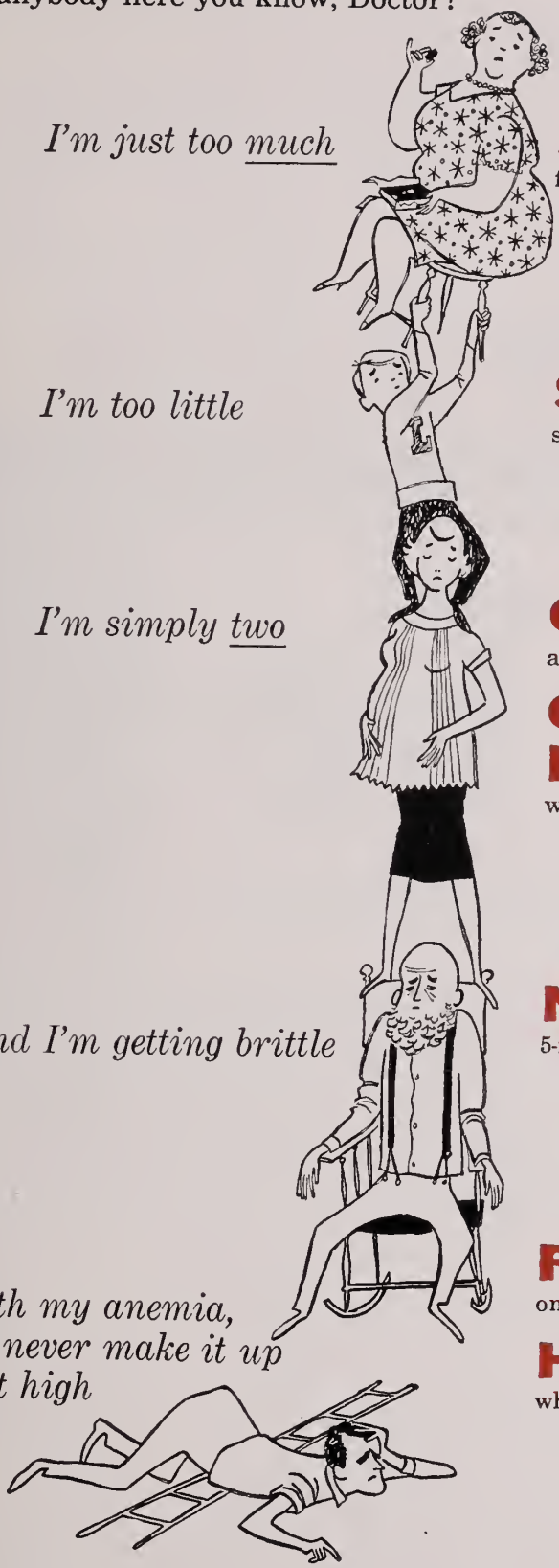
I'm too little

STIMAVITE®
stimulates appetite and growth
vitamins B_1, B_6, B_{12}, C and L-lysine

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OBRON®
a nutritional buildup for the OB patient

OBRON® HEMATINIC
when anemia complicates pregnancy



And I'm getting brittle

NEOBON®
5-factor geriatric formula
hormonal, hematinic and
nutritional support

ROETINIC®
one capsule a day, for all treatable anemias

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Guest Editorial . . . .

Borderline Appendicitis

THE CLINICAL DIAGNOSIS in the patient with possible appendicitis may be at times extremely difficult. All of us have been faced with the problem whether to: (1) Operate when the diagnosis is questionable, or (2) delay and observe the patient.

Proponents of number one say that it is safer to operate and remove a normal appendix than to risk perforation. *The scientifically minded physician states that the morbidity and the mortality of the laparotomy per se is much less than the morbidity and mortality of appendiceal perforation caused by delay resulting from diagnostic error.* On the surface, this reasoning sounds logical. I hear it often. However, there are many fallacies, obvious and implied, in this approach to the problem of possible appendicitis.

One serious objection to this logic is the fact that although a diagnostic error may be made and on actual appendicitis be misdiagnosed, appendicitis may and often does subside without surgery and without perforation and peritonitis.

There is a second fallacy in the previously mentioned premise as a reason for early surgery. In the past years, during the pre-antibiotic era, a perforated appendix was associated with a high morbidity and mortality. With the increasing number and broader spectrum of antibiotics, today the difference in death rate and complication rate is much less when comparing the perforated and non-perforated appendix. This may be emphasized in reviewing all the appendectomies done for acute appendicitis in Norfolk during 1957. In Leigh Memorial Hospital, DePaul Hospital and Norfolk General Hospital there were 322 appendectomies done with a clinical diagnosis of appendicitis. Thirty-six of these had perforated with localized abscess formation or generalized peritonitis. There was only a single death in this group and although the surgery may have been a contributing factor, the fact that the appendix had perforated was not the cause of death. The morbidity was measured by the number of hospital days. The average number of hospital days for those patients who had perforated was ten, as compared to six for those who had not perforated. Every chart was reviewed. The apparent reason for keeping those patients who had peritonitis in the hospital longer was based on caution by the surgeon, *not* on the appearance of a complication. Actual complications occurred in only eight. The majority of these were wound infections.

A third objection to immediate surgery in questionable appendicitis lies in simple arithmetic. If one believes in this premise of early surgery and practices it, then the number of patients undergoing laparotomy will be greater than when one waits and observes. This actual increase in number of patients undergoing surgery, in itself, increases morbidity and mortality. If delay and observation are chosen, then there are many patients who would never come to laparotomy because of: (1) Disappearance of symptoms with a diagnosis of subsiding appendicitis; (2) Subsidence of symptoms without any definite diagnosis. (3) A definite clinical diagnosis other than appendicitis not requiring surgery and (4) A diagnosis of another lesion requiring surgery but with a chance of better preparation of the patient and family.

A fourth objection lies in the words *diagnostic error.* With longer and better surgical residences, well designed post-graduate teaching programs and the more liberal use of consultations, accuracy of diagnosis has improved. Today, clinicians are better trained and better educated and the chances of an early appendicitis progressing to perforation during observation are considerably less likely than in the past.

I have discussed the reasons given for operating early in questionable appendicitis. I have pointed out fallacies in the rationale. I believe in the other alternative, delay and observe the patient, *but not without specific qualifications.* The patient with questionable appendicitis should be *hospitalized* and observed carefully. Consultations can and should be used freely. I have set up arbitrary criteria as indications for exploratory laparotomy. Based on past personal experience and observation, these criteria have changed and, I suspect, will continue to change. While the patient is under observation in the hospital, any one of the following constitutes an indication for operative intervention: (1) Increasing point tenderness, rigidity and rebound, i e.. the clinical development of a definite surgical abdomen; (2) A rising temperature and pulse; (3) A rising W.B.C. with or without a shift to the left. The two latter criteria apply, of course, in the absence of any other cause for elevation of temperature or white count. Should the temperature or white count remain or return to normal and the abdominal signs or symptoms subside, a further medical, laboratory and radiological evaluation may be indicated prior to discharge. The need for such an investigation depends on the feeling of the attending physician or physicians and is beyond the scope of this editorial.

In conclusion then, cautious observation in "borderline" appendicitis is preferable to immediate surgery. This is borne out in an analysis of the false premise that "it is better to remove a normal appendix than to let one rupture." Statistics available in Norfolk support careful observation in the patient with questionable appendicitis, since even with progression to perforation, mortality was almost nil and morbidity minimal. Consultation and careful, frequent examinations in the hospital are vital.

James S. Berger, M.D.

A Few Joint Problems of The Doctors and Lawyers In Virginia

HARRY C. BATES, Jr., M.D.
Arlington, Virginia

I WISH you to know that I was very agreeably surprised when your President, Mr. Taylor, invited me to speak before you here at this meeting. I would like to say that I was overjoyed, because I really was. But I learned some time back, when I was a witness in court, not to ever let a lawyer know my real emotions—he might trap me into a king-sized debacle three jumps later.

Here in Virginia these two honored professions of law and medicine have gone forward together ever since the settling of the first colony just up the river from here at Jamestown. I'm not *sure* they have gone along exactly together, since doctors are prone to seek other doctors in their recreational pursuits, and I suppose lawyers get together also for their social activities—Exhibit #1—see the banquet tonight here, or that held any year at the meeting of The Medical Society of Virginia. Then we must on occasion seek each other's help when, following such a banquet of the physicians, some over-zealous member requires legal advice, or conversely, perhaps a legal eagle must have his head patched. Those are elementary forms of cooperation. In such an endeavor we treat each other just as we treat any other client.

More and more as the years have rolled on we have found ourselves in need of a different kind of cooperation—cooperation between our professions on a full "profession" basis, assisting each other in the proper, and fullest, medical extent of justice, and the correct and complete legal care of the medical case.

I don't need to tell *you* a great many of your cases involve medical problems, that many of your clients brings problems to you that require the combined services of a physician and a lawyer.

Within the past month, since the rumor was whispered about that I would address you here today, I've had three lawyers tell me that the legal profession needs the doctors' help more than the reverse. Well, I doubt that. In the four years that my local medical society has enjoyed their joint dinner and program with the local Bar members, a great many physicians have been heard to remark afterwards that they came away with much more knowledge and understanding of medical-legal questions than they had at the onset of the festivities. This situation is easily explainable. The average physician is necessarily interested most of all in medicine. In order to establish a good practice he must learn all the medicine he can. When he is starting out and has time on his hands, he works in clinics and studies medical books and goes to medical meetings and conventions to increase his knowledge. As his practice increases he has less and less time for other reading and subjects. Since he must be available for medicine most of the time he seldom takes up a different profession. Most of his spare time, if any, is devoted to a hobby. I imagine law, as a hobby, would be interesting, but—well, medicine wouldn't make a very good hobby either.

We get a smattering of legal medicine in medical school. Our real contact comes when we get our first subpoena, and that is often too late. Not knowing what to expect, being just as frightened as any other novice in the witness chair, and having notes that were made in a hurry to refresh our memories from patient-visit to patient-visit, we usually come out of the encounter mad at the world and madder at the legal profession. We're mad because we feel as though we've taken a beating. When we treat a patient we're used to being in control of the situation. When we go to court, you control the situation and we don't like it. Of course, this isn't really any different than when you come into a doctor's office for a physical examination and we give you the works. I've seen a lawyer perspire freely when I was doing something simple to him, such as listening to his heart or checking his blood pressure. The stress reaction is common to all of us and applies whenever we are out of our own element and are not in command of the situation. It makes us equally unhappy. One reason we need closer friendship is to reduce this reaction, to lower the barrier, to ease our own personal lives.

I hadn't been in office very long when I received a letter from your President, Mr. Taylor, inviting

Delivered before the Virginia State Bar Association, Old Point Comfort, May 3, 1958.

us to help establish a liaison committee between our two groups. Since I had just finished appointing some 50 odd committees for other functions, it wasn't difficult to get back in the groove long enough for one more.

Soon after that the two committees, one from the Bar and one from the Medical Society, met and broke the ice—or maybe I should say, "melted the ice", (about 2 buckets full!) in Richmond. Other meetings have followed and just recently I received evidence of the hard work this joint committee has been doing. Yesterday, I believe, the report of this Committee was presented to your organization for its approval. It will be presented to the Medical Society at our next general meeting in October. I am sure it will receive sympathetic consideration and I sincerely hope it will be made a matter of policy.

In establishing the "Standards of Principles Governing Lawyers and Physicians" your Committee has enunciated several important points. First of all, these are principles of "proper conduct" for our two professions, "subject always to the principles of medical and legal ethics and rules of law prescribed for individual professional conduct." This certainly is as it should be. Both great professions function basically on relatively strict codes of ethics, established primarily for the benefit of the client and secondarily for the protection of the professional member. While our ethical codes differ necessarily because of many factors, they both have the same guiding principles and objects basically, and with little effort should surely be made to work cooperatively. With few exceptions the members of our two professions are highly ethical individuals. It has been my experience that where a breach of ethics has occurred it was usually because of a lack of understanding, or because of too rapid a decision rather than because of any deliberate attempt to flout the principles of ethics. I think that our two organizations should make an all-out effort to be positive that our individual members receive and study and use the new "Standards" to which we are referring. I feel certain that this will be a great step forward in bettering our relations, and most of all will result in better handling of cases, more cooperation between participants, reducing unnecessary verbiage and haggling, and will probably give the jury, where such exists, a better picture of the situation.

Let's shift now to another problem that we enjoy mutually. I am thinking of the expert medical witness. It seems to me that the great majority of physicians are not especially interested in giving testimony in legal cases. A few, perhaps, enjoy it, though I don't know why. I'm not often called as a medical witness because of my type of practice, and my experience in this line is quite limited.

As far back as 1914 the American Medical Association made a three year comprehensive study of this subject. Recommendations were made as follows: (1) Definite distinctions should be made between matters of fact and matters of opinion, (2) there should be no restrictions on the testimony of fact, and (3) the testimony on opinion should be limited to the experts called by the court. These experts should be compensated at a rate fixed by the Court and charged as part of the cost of the case or against the party requesting the testimony.

In 1929 the A.M.A. again expressed its offer to cooperate with the American Bar Association and others in trying to bring about suitable changes in court procedure in this field.

The A.M.A. has conducted medico-legal symposiums, mock trial demonstrations, and more recently has produced several movies on the right and wrong way to act in preparation of testimony, giving of testimony, and other related medical-legal problems. Some of you have seen these movies, and I think they are pretty good.

Most of us know that it is difficult for a witness to be impartial. If he is forced into court by subpoena, he objects and takes sides. If he is to be paid by a particular party in a case, it is only natural for him to assume that he is working for that party. If one of the parties in a case is a regular patient, or was even treated by him with particularly good (or particularly bad) cooperation and result, then the physician has a pre-formed opinion regarding that person. You know as well as I do that being and remaining absolutely neutral in an argument is a very difficult psychological problem. Consequently, the medical expert witness, as things are arranged at present, may be merely more expert for one side than he is for the other, and this certainly doesn't present unbiased opinion.

I am strongly in favor of our two groups going ahead with an attempt somehow to establish the expert witness as a completely neutral witness, insofar as it is possible to do so. Considerable information is available on this problem. You may know more about the steps that have been taken elsewhere than I do, but various methods and ideas are being tried over the country.

There will be some who may object to the establishment of a system of impartial medical testimony.

Certainly there may be difficulties in working it out to the satisfaction of all. But once a proper arrangement is established it will automatically clean house of those few in both groups who hang on the fringes and take advantage of the present situation. There *are* a few in every jurisdiction, and while you and I know who they are, catching them is like trying to put the finger on a floating crap game.

Now, one other problem. A few months ago Mr. Dave Kinney, an able barrister from Arlington, and I discussed the question of malpractice before our annual joint dinner meeting of doctors and lawyers.

Any of you who have ever been faced with a possible malpractice suit know how unpleasant it is. Some of you have, and I have. When the initial shock of realization wears off, you begin to figure out what the best procedure is. In my case I went to our own Medical Society Grievance or Mediation Committee. I met them and gave my version of the case, showed them my records and arranged to have other physicians who had been involved in the case appear before them. The Committee then took it upon themselves to call the patient in for a discussion of his version of the case. He was seen several times; the Committee even called in a minister to help talk to the patient; several evenings of three or four hours each were used up by members of the Committee while I perspired freely. I was finally told that I was clear medically, but that the patient was quite paranoid and had threatened to kill me. In addition to that he might sue me also.

I trust you will excuse the use of a personal experience to demonstrate a point. I am sure in my own mind that I would have been needlessly sued and that the legal processes would have been burdened with another unnecessary case, had it not been for our Mediation Committee.

Perhaps the members of the Bar are unaware that many Medical Societies have mediation committees. They are usually composed of several of the more experienced doctors, appointed or elected annually. Their primary purpose is to weed out the case of a grievance between patient and doctor, or doctor and doctor, which is due primarily to a misunderstanding, or a personality conflict, or a fee question. If possible, they try to bring about a reconciliation of the parties involved. If a case is obviously irreconcilable, then the doctor is told so.

This idea is the first step in actually preventing malpractice suits. The A.M.A. reports to me that 29 State Medical Societies, including our own, have so-called medical professional liability review programs similar to our County plan. Some of the Committees go further into the second phase—they actually recommend whether a case, once reviewed, should be settled out of court or defended to the last ditch. If defended, some will provide expert witnesses for the accused. A number of the committees act only when requested to do so by the defendant physician; some of them permit legal counsel and representatives of the insurance carrier to participate in the pre-trial hearings. You may or may not know that professsional liability insurance differs from other liability insurance in that a case cannot be settled by the carrier without the express permission of the defendant physician. On this basis the insurance companies often prefer to sit in on the Committee's hearings.

The California Medical Association has recently worked out an agreement with the California Bar Association whereby upon request medical specialists will be made available by any county medical society to an attorney with a potential medical professional liability case. A theoretical case under this arrangement was a featured article in the November, 1957 "Medical Economics" magazine.

The third and final phase of this type of arrangement is now being tried out in Baltimore and New York City. In those areas the Medical Societies have created panels of impartial experts, three specialists in each of 18 different fields of medicine. The Court may appoint any one of these when indicated, (but usually they are used in large cases, or where there is a great diversity of opinion on the part of opposing experts, or other special instances). This Court-appointed expert then examines the records, x-rays, and patient himself. His report is delivered to the Court and to opposing counsel, before trial. The case may then be settled, or may go on to argument. The Court-appointed expert is subject to cross-examination just as is any other witness.

Now, if my experience in court as a witness is typical, then most doctors would probably welcome this type of arrangement. The average physician, I believe, is very unhappy on the witness chair, and would just as soon avoid it, as I mentioned before. The Court-appointed expert witness is really designated by other physicians who know his professional ability and who trust him. The Court must see that he is amply remunerated for his effort and it should not work hardship on him.

The advantage of all these plans is that they help to weed out unnecessary court procedures. If there

is no case, or if the case can be settled, it is discovered much more quickly and easily than before. I must admit that they do away, perhaps, with much of the need for the professional expert witness.

It is my own personal opinion that most of the areas in Virginia are capable of producing the necessary experts in nearly every field, if such a plan were put into effect.

Meanwhile, our Mediation Committees will continue to pluck cases out of the hands of our legal brethren whenever it is possible to do so.

Now, I have just touched on a few of the reasons for more cooperation between physicians and lawyers, individually and collectively. This discussion could go on all day without exhausting the possibilities. I intend to spare you such suffering since my duty is to help the situation, not aggravate it. I should like to stress the fact that the primary object in improving our relations is to benefit our clients—maybe I should say your clients, our patients. If, as I believe, we benefit incidentally, then so much the better.

Considerable progress has already been derived from our joint effort. I hope much more will come in the future. Your President is to be congratulated on starting the ball rolling in this project.

Again let me thank you for allowing me to appear here today. I sincerely hope you have a successful and gala meeting.

3801 North Fairfax Drive
Arlington, Virginia

STANDARDS OF PRINCIPLES GOVERNING LAWYERS AND PHYSICIANS

Editor's Note: These Standards of Principles Governing Lawyers and Physicians have been approved by the Virginia State Bar Association and will be presented to The Medical Society of Virginia at its annual meeting in the fall.

The Committee from the Society is composed of Dr. E. E. Haddock, Richmond, Chairman; Dr. William Dolan, Arlington; Dr. G. T. Mann, Richmond; Dr. James P. King, Radford; and Dr. T. A. Morgan, Radford.

Preamble

Acknowledging that a substantial part of the practice of law and medicine is concerned with the problems of persons who are in need of the combined services of a lawyer, and a physician; and that the public interest and individual problems in these circumstances are best served only as a result of cooperative efforts of all concerned; we, the Virginia State Bar and The Medical Society of Virginia do adopt and recommend the following declaration of principles of proper conduct for lawyers and physicians, subject always to principles of medical and legal ethics and rules of law prescribed for their individual professional conduct.

A. Medical Reports.

1. Where a report is requested by the patient's attorney, supported by proper written authorization, and where the report is to be based on information which the physician can obtain from available records, he should furnish a report as promptly as possible.

2. Where the report is requested by someone other than the plaintiff, or the plaintiff's attorney, the physician should insist upon proper authorization from the patient before giving the information or the report and his charge for such report should be in an amount to be agreed upon between him and the person seeking that report.

3. When a report is requested, the lawyer should make clear in his written request for a report the specific condition about which he seeks information, and should likewise indicate whether or not he is asking for a prognosis, diagnosis or extent of disability. The physician, upon receipt of such request, should answer such request and furnish such report promptly.

B. Physicians As Witnesses.

1. The relation between a lawyer and a physician should be based upon mutual courtesy and understanding. A physician should understand that medical testimony is frequently indispensable to prove or disprove the nature and extent of injuries. Therefore, when he undertakes to treat a person who has been injured, he has an incidental responsibility with respect to any legal proceedings which may ensue as a result of the patient's injury.

2. It is understood that the fee charged by the physician for his medical services does not take into

account any further time or effort on his part in the event of such litigation, and therefore these principles recognize that it is right and proper that the physician should be further compensated for any additional time or effort expended by him in such litigation.

3. It is recognized that in most instances it is proper that a conference should be held between the physician and lawyer proposing to call him as a witness, at some mutually convenient time before he is to testify.

No physician should be subpoenaed as a witness to testify in any case without prior conference with the lawyer calling him, concerning the matters as to which he is to be interrogated, unless both the physician and the lawyer agree that such conference is unnecessary, or unless the lawyer is unable, after a bona fide effort, to obtain such a conference.

4. When requesting or summoning a physician to attend court, the lawyer should appreciate that a physician has continuing and often unpredictable responsibilities to his patients. Insofar as he is able, the lawyer should make arrangements to permit the physician to testify with a minimum of inconvenience and delay.

5. Insofar as it is in their power to do so, however, lawyers should make such advance arrangements for the attendance of physicians as witnesses, as will have due regard for the professional demands upon the physician's time, including preparation of medical evidence. Such advance arrangements contemplate some reasonable notice to the physician of the intention to call him as a witness, prior to the issuance of the subpoena, and calling him by phone after the trial has commenced and advising him of the approximate time when he will be called to testify.

6. It is recognized that, although every reasonable effort should be made to minimize the inconvenience to the physician witness, the dispatch of the duties of the courts cannot be governed by the convenience of litigants, lawyers or witnesses, whoever they may be.

7. When a physician, who has not treated the injured party, is called to testify as an expert witness, he shall be paid such fee as is agreed upon prior to the trial with the lawyer representing the party calling him.

8. The physician, while testifying should:

(a) At all times maintain the dignity of his profession;

(b) Answer questions as concisely and objectively as possible, using terminology which is understandable to a jury of laymen.

(c) If he does not know the answer to any question, so state and make no attempt to conjecture or theorize, or give answers not responsive to questions propounded or volunteer testimony;

(d) Under no circumstances permit any bias, prejudice, favoritism or personal interest to influence his testimony.

9. The attorney, in examining or cross-examining a physician, should, as in the case of all other witnesses, avoid questions which are intemperate or unfair. Questions of this type are no doubt designed to discredit a witness' testimony by inciting emotional demonstration and are beneath the dignity of the ethical attorney and equally in violation of the dignity of the physician. If they do arise and are not acted on promptly, the witness may address the court and inquire if he is required to answer such questions.

10. All additional medical consultations considered necessary to the proper preparation for a legal presentation should be accomplished only after consultation with the patient-litigant's legal representative and the patient-litigant's physician.

11. Nothing herein is intended to alter the rules of law with reference to attendance of witnesses and fees for their attendance nor the law with reference to privilged communications.

C. Physician's Fee and Services.

1. It is fully understood that under no circumstances should the physician's charges, or his fees as a witness, be contingent upon the success of the patient's litigation.

Fluid and Electrolyte Balance in Heart Disease

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BEFORE BEGINNING a discussion of fluid and electrolyte balance which occurs in a diseased state, it seems wise to review the normal physiology; then the effects of the disease state can be discussed in relation to the normal.

It is important first to define units of measurement, which are useful in understanding the relationship of reactions between electrolytes as well as their physical capabilities to effect shifts in water balance between body fluid compartments. The following terms are used: Mol (M), Millimol (mM), equivalent milliequivalent (mEq), osmol milliosmol (mOsm).

A Mol of a substance is a molecular weight of that substance expressed in grams. One Mol of glucose is 180 grams and one Mol of sodium chlorides is 58 grams. A millimol is 1/1000 of a Mol or the molecular weight expressed in milligrams. One millimol of glucose is 180 milligrams and one millimol of sodium chloride is 58 milligrams. To convert the weight of a substance in milligrams to millimols, one must divide that weight by the molecular weight of the substance: for example, $\frac{1000 \text{ mg.}}{58}$ Na = 17.1 mM Na.

Substances do not react with each other gram for gram, but do react proportionately to their equivalent values. An equivalent of a substance is the molecular weight in grams divided by the valence, since this is a quantitative expression of the ability of one element to combine with another. Valence is the combining power of an element in relation to other elements of opposite electrical charges. A milliequivalent is therefore the molecular weight in milligrams divided by the valence. A mol or millimol of a univalent ion is the same as an equivalent or a milliequivalent, but a milliequivalent of a divalent ion in one half the value or weight of a millimol. For example, there are 23 milligrams to 1 millimol of sodium and 23 milligrams to 1 milliequivalent of sodium. However, there are 40 milligrams to 1 millimol but only 20 milligrams to 1 milliequivalent of calcium.

To convert milligrams per 100 cc. to milliequivalent per liter the following formulae are used:

$$\text{mg./100cc. x } 10 = \text{mg./L.}$$

$$\frac{\text{mg./L x val}}{\text{molecular wt.}} = \text{mEq./L.}$$

To convert milliequivalents per liter to milligrams per cent the following formulae are used:

$$\frac{\text{mEq/L}}{10} = \text{mEq/100cc.}$$

$$\frac{\text{mEq/100 cc. x mol. wt.}}{\text{valence}} = \text{mg.\%}.$$

Gases can also be expressed as molecular equivalents; one mol of CO_2, carbon dioxide, occupies 22.26 liters under standard conditions[1], (zero degrees centigrade and 760 millimeters of mercury), and one millimol occupies 22.26 cc. The concentration of a gas dissolved in a liquid is usually expressed as cc. of gas per hundred cc. of liquid or volumes per cent. Therefore, to convert this to millimols per liter the following formula is used:

$$\frac{\text{Vol. \% x } 10}{22.26} = \text{millimols/L.}$$

Osmol is a term which expresses measurement of osmotic pressure. Whenever a substance is in solution it exerts an osmotic pressure which is related to the number of particles in the solution. One millimol of a substance such as glucose which does not dissociate is equal to one milliosmol while one millimol of a substance such as sodium chloride which dissociates into two components, sodium and chloride, results in the formation of two milliosmols, since each of the two components exert an equal osmotic pressure.

Effective osmotic pressure becomes evident when two different solutions are separated by a membrane which is permeable to the solvent but not to the

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solutes. If the concentration of solute on one side of the membrane is greater than that on the other, then the solvent will move across the membrane until the concentrations are equal on the two sides. The force which causes the solvent to move from the side with the lower concentration to that with the higher concentration, until equilibrium is reached, is the *effective osmotic pressure.* It is this effective osmotic pressure that operates to cause shifts of the water across membranes between body compartments.

The term *tonicity* refers to the concentration of a solute in solution on one side of a semi-permeable membrane compared with the concentration of another solute on the other side of this membrane, which is permeable to the solvent but not to the solutes. Tonicity is useful in expressing effective osmotic pressure. Two solutions with equal concentration are isotonic. A solution which is more concentrated than another is hypertonic and one which is less than another is hypotonic. Thus, solutions which are equal in osmoler concentration to the body fluids are isotonic. Those of greater concentration are hypertonic and those of lesser concentration are hypotonic.

SUBSTANCES WHICH ARE IMPORTANT IN EFFECTIVE OSMOTIC PRESSURE

The cations of the body fluids are sodium (Na+), potassium (K+), calcium (Ca+), and magnesium (Mg+). The anions are chlorides (CL—), Bicarbonate (HCO_3—), phosphate (PO_4—), and sulfate (SO_4—). Since the pH of the body fluid is on the alkaline side, proteins which are amphoretic act as anions. Sodium comprises the major cation in the extracellular fluid and potassium in the intracellular fluid. Changes in concentration of these produce changes in effective osmotic pressure as will be shown later. Protein may exert an effective osmotic pressure also. If protein is placed in solution with electrolytes and separated by a semi-permeable membrane from another solution containing similar electrolytes only, an effective osmotic pressure is produced. This is exerted on the side containing the protein and in the vascular system this is known as oncotic pressure. This oncotic pressure is important since it is part of a process which allows movement of fluid between the capillaries and extracellular spaces. The hydrostatic pressure at the arteriolar limb is on the order of 32 mm. of mercury[2], and that on the venous limb is on the order of 12 mm. of mercury while the oncotic pressure or effective osmotic pressure within the capillary is on the order of 25 mm. of mercury.[3] It is apparent that fluid diffuses out at the arteriolar limb and is "drawn in" at the venous limb. An additional effect of the protein in the vascular system results in slightly increased cation concentration in the plasma as compared with interstitial fluid, and a slight decrease in the anion concentration. This can be expressed quantitatively as 1.05 and 0.95 respectively. It is called the Gibbs-Donnan effect.[1,3]

VOLUME OF THE BODY FLUID COMPARTMENTS

The water content of the body (total body water) is about 60% of the body weight.[1] This is higher in muscular individuals, around 70%, and lower in obese persons, around 50%.[4] It is separated into intracellular and extracellular fluid compartments. Approximately 40% is found in the cells, the intracellular compartment, and 20% in the extracellular compartment. The extracellular compartment is further divided into the plasma volume and interstitial fluid volume. The plasma volume is approximately 5% of the body weight. For example, an ideal man weighing 70 kilograms has the following fluid compartments.

Total Body Water (TBW) 70 x 0.6 = 42 L
Intracellular Fluid (ICF) 70 x 0.4 = 28 L
Extracellular Fluid (ECF) 70 x 0.2 = 14 L
Plasma Volume (PV) 70 x 0.05 = 3.5 L

COMPOSITION OF THE BODY FLUIDS

The composition and concentration of the electrolytes in the extracellular fluid are not difficult to determine since that in the serum is comparable to interstitial fluid through the presence of protein results in a slight difference in concentration as noted above. However, for practical clinical purposes the serum concentration is considered to be that of the extracellular fluid. These are shown in the following table.[5]

Cation	mEq/L	Anion	mEq/L
Sodium (Na)	142	Bicarbonate	27
Potassium (K)	5	Chloride	103
Calcium (Ca)	5	Phosphate	2
Magnesium (Mg)	2.0	Sulfate	1
		Organic Acid	5
	154	Protein	16
			154

The determination of the concentration and composition of the electrolytes in the intracellular fluid is more difficult and can only be approximated. The

composition of these electrolytes is shown on the following table.[1]

Cations	mEq/L	Anions	mEq/L
Sodium (Na)	10	HCO_3	10
Potassium (K)	150	PO_4 SO_4	150
Magnesium (Mg)	40	Protein	40

The sum of the number of cations and anions in the extracellular fluids is approximately 310.[1] This can be expressed as milliosmols since each particle exerts an osmotic pressure.

Figure I shows diagrammatically the distribution of fluids in the various body compartments and the electrolyte concentrations in the extracellular fluid. The horizontal line expresses volume and the vertical line concentration.

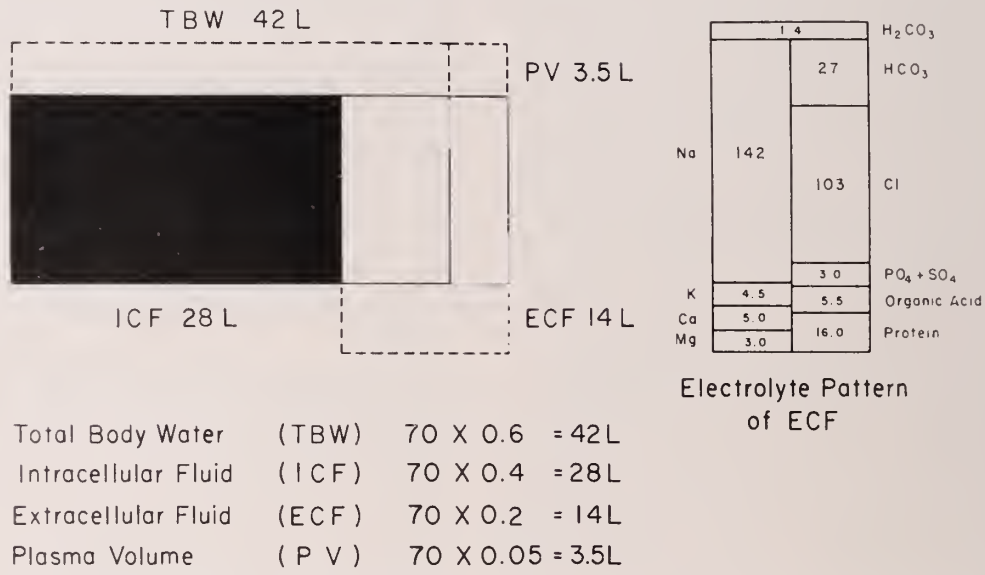


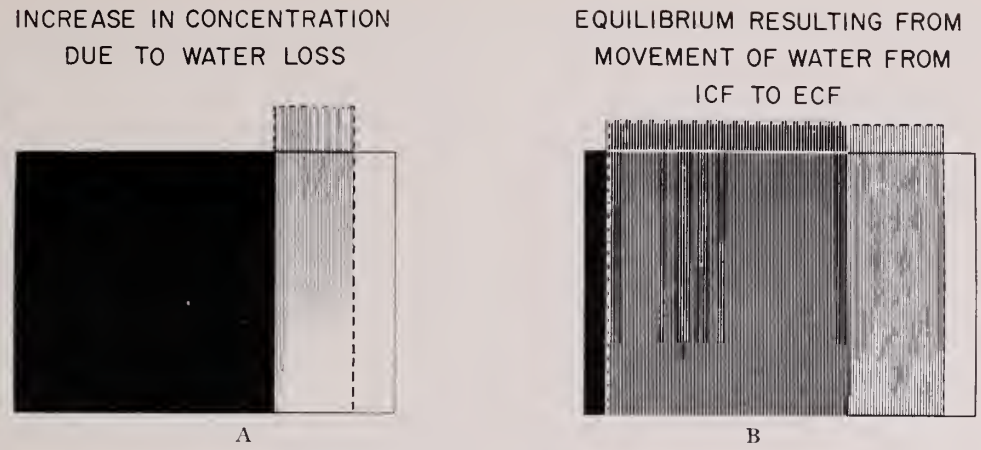
Figure I

* This legend will be followed in all subsequent similar diagrams.

It can be assumed that the osmolar concentration of the extracellular and intracellular fluid is the same under normal circumstances.[6] Any change therefore in the concentration of the electrolytes in the extracellular fluid will result in a shift of fluid into or out of the cells depending on the direction of the change. If for example, the osmotic concentration of the extracellular fluid increases, then water will move from the intracellular fluid compartment to the extracellular compartment until the concentrations are equal. If the concentration of the extracellular fluid decreases, the water will move to the intracellular fluid compartment until the osmotic concentrations are again equal. The concentration of the electrolytes in the intracellular fluid remain fairly constant. However, there is a continuous interchange of the electrolytes and metabolic processes in the cells which prevent the sodium from increasing its concentration by extruding it from the cell and concurrently maintaining the concentration of potassium within the cell.[12]

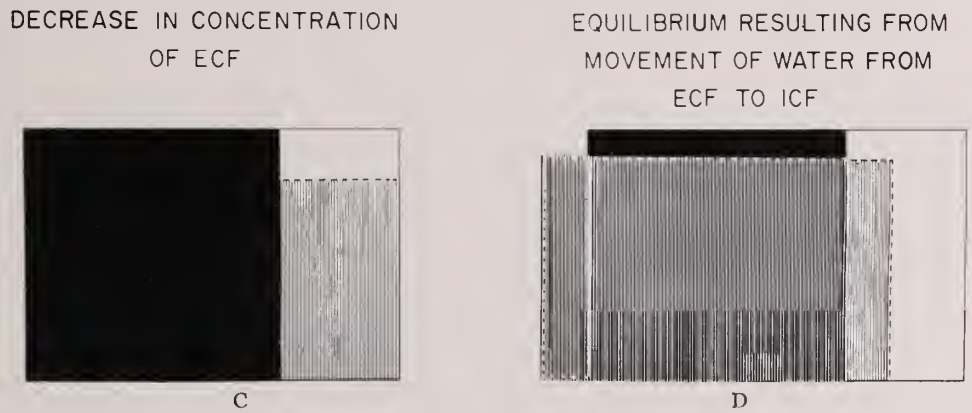
The discussion in the preceding paragraph represents an important concept, since it demonstrates how a change in the tonicity of the extracellular fluid is reflected in the total body water. This is shown diagrammatically in Figure II. This shows why it is necessary to give enough sodium to increase the concentration in the total body water when correcting sodium depletion as will be discussed later.

Since sodium makes up more than 90% of the cation concentration of the extracellular fluids, changes in its concentration generally reflect changes in tonicity of the body fluids and calculations of deficits of water and sodium sometime may be roughly estimated by these changes. When there is marked hyperglycemia, however, this does not hold true, since glucose does not passively enter the intracel-



Black represents—Intracellular fluid
White represents—Extracellular fluid
Shaded represents—Deviations from normal

Water loss above results in an increase in the concentration of the extracellular fluid accompanied by a decrease in volume. (A) Since the extracellular fluid is now hypertonic, water moves from the intracellular space to the extracellular space until equilibrium is reached. (B) The initial deviations from normal concentration and volume of the extracellular fluid are therefore shared by both fluid compartments resulting in hypertonic contraction of total body water.



When there is decrease in concentration of the extracellular fluid (C) water moves from the extracellular space to the intracellular space. This results in hypotonic contraction of the extracellular fluid and hypotonic expansion of the intracellular fluid as shown in (D). This also demonstrates how a change in concentration in one space is reflected throughout the whole body water.

Figure II

lular compartment and an effective osmotic pressure is exerted. This causes more water to enter the extracellular fluids with resulting decrease in sodium concentration though the total sodium is normal in amount. Under these circumstances there is a reduction of sodium concentration but without a decrease in tonicity.[1]

It seems important to emphasize that concentrations of the electrolytes only roughly reflect their total amount in the body. If electrolytes and water are lost in isotonic fashion, then, even though a considerable deficit exists, there will be no change in concentration. If water is retained in greater quantities than sodium then the concentration will be reduced but the total body sodium will be normal or increased. This is frequently seen in heart failure.

If water and sodium are both lost but water is lost in greater quantities than sodium, though the concentration is normal or elevated, the total body sodium is decreased.

In potassium depletion accompanying dehydration resulting from excessive diuretic therapy, the concentration of serum potassium may be increased because of contraction of the extracellular fluid while the actual amount of body potassium is decreased.

Serum concentrations therefore are guide posts which must be intelligently interpreted.

HOMEOSTATIC MECHANISMS WHICH MAINTAIN THE OSMOLARITY OF THE BODY FLUIDS

There are a number of factors which contribute to homeostasis of the body fluids and electrolytes. One of the most important is that which allows excretion or retention of water by the kidneys. An increase in tonicity of the body fluids results in an increased secretion of antidiuretic hormone (ADH) by the posterior pituitary which causes water retention by the kidneys and tends to restore tonicity to normal. A decrease in the tonicity of the body fluids is followed by a decrease in secretion of ADH with resulting diuresis which also tends to restore tonicity to normal. These mechanisms are effective until the extracellular fluid is seriously depleted, then further reduction in volume of the fluid causes increase in secretion of ADH and reduction in urine output, even though tonicity is reduced. It appears, therefore, that tonicity is of paramount importance in the control of water excretion until volume is seriously compromised, then volume takes precedence, despite decrease in tonicity.[1]

Conditions of stress also probably result in increased secretion of ADH with resulting retention of water in greater quantities than sodium. This phenomenon has been shown to occur post-operatively. The intensity of the response is proportional to the severity of the stress.[7,8]

Sodium excretion or retention seems to be related to changes in volume of the extracellular fluid rather than concentration of sodium. If the extracellular fluids are expanded by either hypertonic sodium chloride or hypotonic sodium chloride, sodium excretion is enhanced despite the fact that sodium concentration is increased with one and decreased with the other procedure. If the extracellular fluids are decreased by water deprivation or by loss of electrolytes in excess of water there is a diminished excretion of sodium in the urine despite the fact that in the first instance serum sodium concentration is increased and in the latter it is decreased. The location of the receptors which effect these changes is not known though there is some evidence that they are located on the arterial side and perhaps in the cranial cavity.[1,9]

These changes are mediated through the adrenal cortex. Increase in the secretion of aldosterone by this gland causes reabsorption of sodium and excretion of potassium while decrease in this hormone causes a reverse effect.[10] Under conditions of stress there is evidence that excessive amounts of this hormone are excreted.[8] Aldosterone secreting tumors of the adrenal glands have been described which produce marked physiological effects, chiefly sodium retention and potassium depletion, with resulting hypochloremic alkalosis.[11]

ACID BASE DISTURBANCE

The pH of the plasma is normally maintained between 7.35 and 7.45 and the limits of compatibility with life are 7.0 to 7.8.[1] This narrow normal range is due to the efficient buffer system of the body which allows strong acids or bases to be converted to weak acids or bases, thus minimizing deviations in pH. These buffers consist of proteins, phosphates and the carbonic acid-bicarbonate pair. The proteins and phosphates are of great importance in the cells and, in addition, the phosphates are of importance in conservation of base and acidification of the urine. The buffers of the plasma which can be estimated easily are the H_2CO_3-$BHCO_3$ pair. The ratio of H_2CO_3-$BHCO_3$ which maintains a pH of 7.4 is 1 to 20 and the particular value of this pair is that the concentration of H_2CO_3 is determined by the tension of CO_2 in the blood. This can be varied by changes in respiratory rate and volume. If acidosis occurs, respiration becomes deep, CO_2 is blown off, and pH tends to return toward normal.

The HCO_3 concentration of the serum is useful in determining the presence of alkalosis or acidosis provided that one understands the diseased process which is under study. To thoroughly document the nature and degree of the disorder, blood pH determinations are necessary, however. In metabolic acidosis the HCO_3 decreases and in metabolic alkalosis it increases with secondary changes in H_2CO_3 in the same direction, as an effort to maintain a ratio of 1 to 20. When there are primary changes in the CO_2 as occurs with emphysema, then CO_2 increases first, resulting in respiratory acidosis, secondarily the HCO_3 rises due to reabsorption of HCO_3 by the kidney and thus the ratio of 1 to 20 tends to be maintained and marked changes in pH avoided. The reverse occurs in hyperventilation which results in decrease in CO_2 producing respiratory alkalosis. The HCO_3 is reduced because of excretion by the kidneys. Therefore, the HCO_3 concentrated has an opposite significance in metabolic and respiratory acidosis and alkalosis and determination of the pH is necessary to differentiate the two if it cannot be done on clinical grounds.

The administration of an acid salt such as ammonium chloride (NH_4CL) causes an increase in chloride and a decrease in HCO_3 and produces

metabolic acidosis. An excessive loss of the cations, sodium and potassium, by a substance such as Diamox results in a decrease in HCO_3 producing metabolic acidosis. Clinically, metabolic acidosis may result from renal insufficiency due to retention of phosphate, sulfate and organic acids. The loss of cations from the G.I. tract due to diarrhea will also cause metabolic acidosis. Metabolic alkalosis occurs following loss of chloride by vomiting or by excessive ingestion of alkali such as sodium bicarbonate.

HEART FAILURE

Congestive heart failure results from a chain of physiological events which are precipitated by an inadequate cardiac output relative to the body needs. This series of events is shown in Figure III.

Because of inadequate output of the left ventricle the blood which is pumped to it by the right ventricle cannot be completely transferred to the arterial side resulting in increased pulmonary venous pressure, and transudation of fluid into the pulmonary interstices and alveoli. The same events follow failure of the right ventricle with resulting peripheral edema, venous congestion and hepatic congestion. Venous tone is also increased which contributes to the elevated venous pressure.[19] Concurrently, the arterial blood volume is decreased, renal plasma flow is reduced and tissue hypoxia occurs.

Because of a reduced renal plasma flow, decreased glomerular filtration occurs. This, associated with normal tubular reabsorption, results in a greater extraction of sodium from each cc. of glomerular filtrates than normally occurs.[13,14] This causes an increase in extracellular fluid volume and edema formation. There are other factors involved which include reabsorption of sodium as a result of decrease in arterial blood volume. Though the mechanism of this is not clear[15,16], it may be due to increased secretion of aldosterone.[10,17]

Water retention may occur in heart failure because of increased production of antidiuretic hormone or a substance with similar properties. It has been shown that cardiac patients will react differently from the normal individuals when Pitressin Tannate is administered in that such a patient will continue to retain water as long as the Pitressin is given. The normal individual will excrete water after several days despite the continued administration of the drug.[18] The cause of the abnormal secretion of ADH may be due to intracellular changes resulting from potassium loss when failure occurs.[17]

Congestive heart failure results in the accumulation of fluid and electrolytes chiefly in the extracellular compartment but probably in the intracellular compartment as well.[12,20] The total body sodium is increased and potassium decreased, which changes are reversed as failure improves.[21]

In uncomplicated congestive failure, the expansion of the extracellullar fluid is isotonic so that the electrolyte concentration is normal even though the total amounts of electrolytes are increased. These patients have dyspnea, orthopnea, pulmonary congestion, hepatomegaly, elevated venous pressure and peripheral edema in varying degrees. Rest, digitalization and restriction of sodium intake will often result in loss of fluid and electrolytes in isotonic proportions with restoration of the body fluids to normal.

Figure IV shows the change in fluids which occur in uncomplicated congestive failure.

MECHANISM OF CONGESTIVE HEART FAILURE

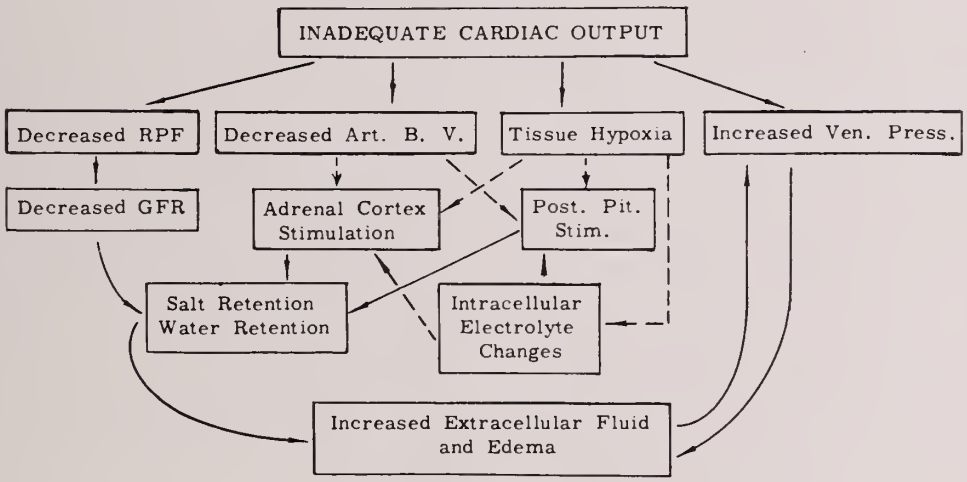
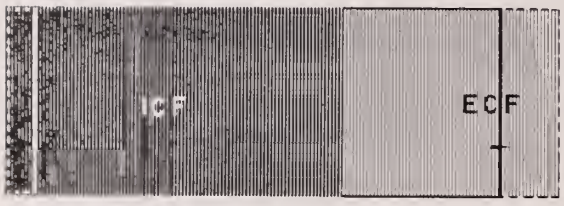
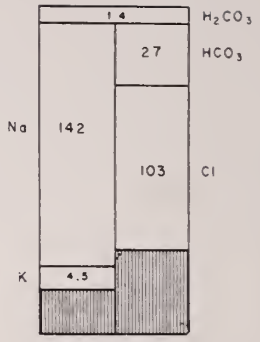


Figure III



Solid lines show normal relationships.
Broken lines represent changes from the normal.*



Normal concentration of serum electrolytes.

Figure IV

HYPONATREMIA COMPLICATING HEART FAILURE

This results from a variety of conditions and can be classified as follows:

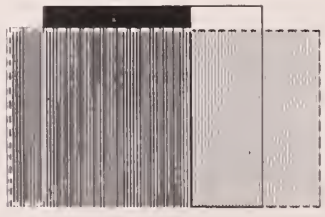
1. Hyponatremia due to dilution
   a. acute
   b. chronic
2. Hyponatremia due to depletion
3. Hyponatremia due to changes in cellular metabolism
4. Combinations of the above

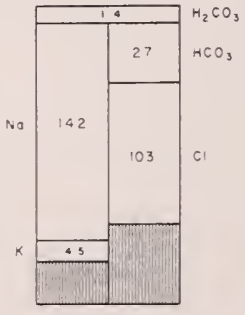
ACUTE HYPONATREMIA

Acute hyponatremia due to dilution results from retention of water in greater quantities than sodium as a result of stress. This may follow surgical procedures which produce well known metabolic changes.[1,22] These include increase in ADH activity with water retention and increases in aldosterone excretion with sodium retention. The water retention is predominant, however, so that hyponatremia results. There is an increase in the extracellular and intracellular fluid with a decrease in the concentration of the electrolytes as noted in Figure V. Hydration of the patient enhances the effect. An infection such as pneumonitis in a compensated cardiac patient may also cause water retention with resulting hyponatremia.[18] These patients have pulmonary congestion, edema, elevated venous pressure, gallop rhythm and may have restlessness, mental confusion or convulsions. The urine may be concentrated. The management includes the restriction of fluids, the restriction necessary depending on the urinary output as well as the estimated insensible water loss.[23] Adequate digitalization should be assured and any infection present treated with an appropriate antibiotic. Occasionally the administration of alcohol will promote diuresis, probably by the inhibition of ADH. Alcohol can be given in amounts of 30-50 cc. by mouth or intravenously in a 3% or 5% solution.[24,25]

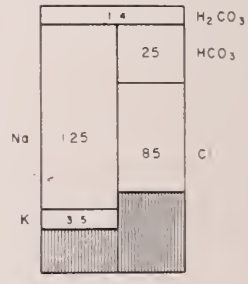
This type of dilutional hyponatremia is reversible and when the stress is over water is excreted and the sodium concentration returns to normal.

Acute Hyponatremia





Normal



Hyponatremia

Example of Acute Hyponatremia:

There is an increase in volume and a decrease in concentration of the body ICF and ECF.

Figure V

CHRONIC DILUTIONAL HYPONATREMIA

Patients who have severe prolonged heart failure may develop hyponatremia with edema though there has been no obvious stress to precipitate this. This indicates a serious disorder. The physiological mechanisms which allow this to occur are difficult to define, but probably result from a resetting of the osmoreceptors and volume receptors which normally maintain tonicity and volume of the body water compartments. These are set at a lower level so that when the concentration of sodium, which reflects tonicity is lowered, ADH is not decreased as it normally is, but continues to exert its effect on the renal tubules and water retention is sustained. In a similar fashion expansion of the extracellular fluid is not followed by decrease in aldosterone excretion but this hormone is continuously secreted and results in increase of body sodium.[26] There is also evidence that aldosterone is secreted in increased quantities in heart failure.[10]

There are also cellular factors which contribute to the development of chronic dilutional hyponatremia of heart failure.[26] These entail:

1. Changes in the cells so that the osmotic activity of cellular solutes is decreased with resulting loss of water from the cells and dilution of the extracellular fluid.
2. Shifts of sodium into the cells and inactivation by combining with proteins.
3. Inability of the cells to maintain a normal sodium potassium ratio within the cell. This results in increase of intracellular sodium and decrease of intracellular potassium.

The distribution of fluid in the intracellular compartments and extracellular compartments depends on the precipitating causes. There may be an increase in extracellular fluid as well as intracellular fluid and the concentration of electrolytes is decreased. This is shown in Figure VI. However, the intracellular fluid may remain normal or decreased[35] probably depending on how much the changes in cellular metabolism are contributing to the condition.

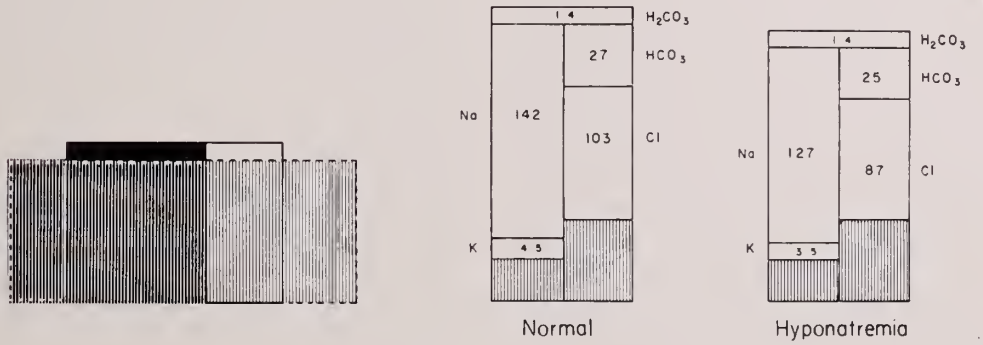
Serum sodium and chloride concentration are decreased but HCO^3 concentration are usually normal or slightly low. The blood urea is normal or moderately elevated depending on the renal function. These patients are in severe congestive failure, do not respond to mercurial diuretics and may be somnolent and disorientated. Therapy is outlined in Table I. Dilutional hyponatremia in a given patient may be multiple in origin. In addition to chronic causes, further dilution may result from acute retention of water which follows stress caused by an infection or trauma.

Table I

Management of Dilutional Hyponatremia

1. Ascertain and correct the underlying cause.
2. Control any arrhythmia.
3. Assure adequate digitalization.
4. Limit fluids when indicated.
5. Give an adequate diet including vitamins.
6. The administration of alcohol may be helpful.
7. Potassium balance should be maintained.
8. Mercurial diuretics followed by Aminophyline are sometimes useful.
9. The production of acidosis by ammonium chloride and Diamox, followed by the administration of mercurial diuretics occasionally produces dramatic results.
10. The administration of hypertonic saline is rarely but occasionally beneficial.

CHRONIC HYPONATREMIA



There is an increase in volume of ECF and probably of the ICF. There is decreased electrolyte concentration of the body fluids, as reflected in the ECF.

Figure VI

Every effort should be made to prevent or correct any stress which might be a factor in causing antidiuresis and anti-natruresis. Infections should be treated with appropriate antibiotics. Arrhythmias should be controlled if possible so as to assure optimal cardiac output. The conversion of auricular fibrillation to normal sinus rhythm may result in dramatic improvement of heart failure.[27] Adequate digitalization should be assured. Occasionally a patient is seen who has been taking digitalis for several years but has never received an adequate amount. More often, however, digitalis intoxication, with accompanying arrhythmias, is found because of increased cardiac damage or potassium depletion. The correction of this may result in improvement. Fluids should be restricted in patients who have developed rapid accumulation of edema with hyponatremia particularly in post-operative patients. Then an obligatory negative water balance should be produced by limiting the amount of fluid intake to 1200 to 1500 cc. The degree of restriction, however, depends on the renal function as well as environmental temperature and must be individualized. All measures should be used to improve the heart failure including the removal of the transudates from the chest and abdominal cavity by mechanical means. An adequate diet should be administered because of the necessity that cellular metabolism be maintained. Adequate vitamins, particularly Thiamine Chloride, should be given. Sometimes the patient improves dramatically when the diet is made attractive and he is encouraged to eat. Occasionally the administration of alcohol which inhibits ADH is followed by profuse water diuresis as previously described.

Since the development of congestive failure is accompanied by a decrease in the exchangeable potassium in the body and a reversal of this when compensation is restored, it seems reasonable to administer potassium in adequate amounts to replenish the potassium stores which have been depleted. Such attempts at restoration have occasionally been followed by an increase in serum sodium and improvement.[28] Potassium should be given in amounts of 50 to 75 mEq. daily by mouth, which can be supplied by giving 5 to 6 grams of potassium chloride. If given intravenously, it should be administered very slowly in amounts of no more than 20 mEq. per hour. In the face of marked oliguria, smaller doses should be given and serum levels followed.

Patients with chronic dilutional hyponatremia become unresponsive to mercurial diuretics. This can sometimes be remedied by the administration of ammonium chloride 5 to 8 grams daily for four days prior to the mercurial injection. Occasionally the injection of a mercurial diuretic intramuscularly or subcutaneously followed in two hours by the intravenous administration of 0.5 grams of Aminophyline will effect diuresis.[29] The deliberate production of hyperchloremic acidosis by the administration of ammonium chloride and Diamox and then mercurial injection have been shown to result in diuresis and increase of serum sodium.[30] This is reported to be due to the excretion of urine containing sodium in concentrations less than that of the plasma and chloride in greater concentration than the plasma. When water is restricted to that of extrarenal losses then sodium is "released" and the plasma sodium concentration increases. A similar effect can be produced by the administration of cations exchange resins followed by Diamox and then the injection of a mercurial diuretic. Adequate potassium should be given concurrently because of the depletion of this ion by Diamox, ammonium chloride and mercurial diuretics.

Occasionally after other measures fail and the sodium concentration becomes very low (around 115 mEq/L or less) the administration of sufficient hypertonic sodium chloride to rise the serum concentration approximately 10 to 15 mEq. is justified. Water should be restricted for 8 to 12 hours so as to allow equilibration to take place. If improvement occurs it is usually temporary but occasionally diuresis results. Not infrequently the edema becomes more marked as water is allowed again and heart failure becomes worse.

HYPONATREMIA DUE TO DEPLETION

Though hyponatremia complicating congestive heart failure is usually due to retention of water in greater quantities than sodium, occasionally it results from a loss of sodium in greater quantities than water. This may follow vomiting, diarrhea, loss of sodium through a salt losing kidney, by paracentesis or by the frequent administration of mercurial diuretics. After such losses if H_2O is given without electrolytes hyponatremia results.

At the onset when tonicity decreases, ADH hormone excretion is inhibited and the excess water is excreted until the fluid becomes isotonic again. Volume is decreased and tonicity maintained. However, when volume is severely compromised then ADH is again excreted and volume is maintained despite a reduction in tonicity. Since the osmolarity of the

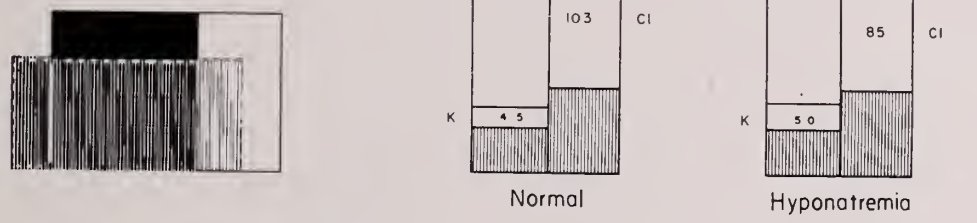
extracellular fluids is decreased the fluid will move to the intracellular compartment until the concentration in the two compartments is equalized. This further reduces the extracellular fluid compartment. The final result is a hypotonic contraction of the extracellular and hypotonic expansion of the intracellular compartments.[1] This is shown in Figure VII. There is decreased glomerular filtration and subsequent oliguria with elevated blood urea. The serum sodium and chloride are low and HCO^3 is usually reduced also. However, if diuresis has been produced repeatedly with a mercurial diuretic then the sodium replacement should be carried out promptly. The therapy is outlined in Table II.

TABLE II

1. Correct the depletion.
   a. increase the dietary sodium in mild cases.
   b. give hypertonic sodium chloride slowly in advanced cases.
2. Observe for hypokalemia, digitalis intoxication, and nutritional deficiency.
3. Withhold mercurial diuretics until the condition is corrected.

In early mild cases where the patient can take

HYPONATREMIA DUE TO DEPLETION



The electrolyte concentration of the body fluids is decreased. There is a decrease in the volume of the ECF and increase in that of the ICF due to movement of water from the extracellular to the intracellular compartments.

Figure VII

chloride may be further depressed and HCO_2 elevated. Potassium is also decreased unless renal insufficiency is marked and retention has occurred. These patients are apathetic and anorexic and often disorientated. They have muscular weakness, muscle cramps, nausea and vomiting. There is decreased peripheral blood flow, low blood pressure, tachycardia and these patients are unresponsive to mercurial diuretics.

MANAGEMENT OF HYPONATREMIA DUE TO DEPLETION

It is most important to obtain a history of loss of electrolytes such as restriction of dietary sodium, frequent administration of mercurial diuretics, removal of ascitic or chest fluid, existence of vomiting or diarrhea or the finding of excessive amounts of sodium in the urine. If such a history is obtained, the patient has the clinical findings of the syndrome and the biochemical abnormalities are present, then fluid and food the addition of sodium chloride to the diet will effect dramatic improvement. Potassium and proteins are supplied simultaneously. If, however, the physiological changes are marked, it is necessary to give hypertonic sodium chloride intravenously. Since any change in the tonicity of the extracellular fluids is reflected in the whole body water it is necessary to calculate the amount of sodium needed on this basis. An amount should be given which is estimated to increase the concentration of the sodium to the desired amount in the total body water and not in the extracellular fluid alone. The water will shift from the intracellular fluids to the extracellular fluids and tonicity of the extracellular fluids increases until equilibrium is reached. Fluid should be withheld for 8 to 12 hours after the concentrated sodium chloride solution is given. Because of the danger of precipitating heart failure, it is wise to give about 1/3 of the calculated amount and observe the effect. Frequently subsequent amounts can be given by mouth.

If renal function is adequate and cardiac failure not far advanced, dramatic improvement will be obtained following the administration of concentrated sodium chloride.

In such patients potassium stores are depleted simultaneously with sodium stores and when urine volume is established potassium should be given. It should be preferably administered by mouth but it can be given intravenously in amounts not exceeding 75 milliequivalents in 24 hours at a rate of 20 milliequivalents per hour. Subsequent amounts depend on the potassium concentration when expansion of the fluid compartment has been obtained. As potassium concentration increases, digitalis, which may have been withheld during the period of potassium depletion, should be started again and adequate amounts given.

It should be emphasized that hyponatremia in an individual patient may be multiple in origin. It may be in part due to dilution, in part to cellular changes and in part due to loss of electrolytes. Vigorous therapy with intravenous concentrated sodium should therefore be very cautiously employed. A history of loss of electrolytes must be obtained before such therapy is begun and even then complete correction should not be attempted at once. The separation of dilution and depletion may be aided by determination of the plasma volume and total circulating sodium.[36] If this is increased, dilution is present, if decreased the hyponatremia is due to depletion. This method is now used in our laboratory and gives promise of being a helpful procedure.

METHOD OF CALCULATION OF AMOUNTS OF SODIUM THAT SHOULD BE ADMINISTERED

An individual weighing 70 kilograms will have a total body water of 42 liters. In order to calculate the total deficit of sodium, one subtracts the serum sodium concentration of the patient from 142 which is the normal concentration of sodium in milliequivalents per liter. If his serum sodium is 120 mEq/L then he would have a deficit of 22 mEq/L or a total deficit of 924 mEq. (22x42) This can be converted into grams by multiplying 924 by 58 (molecular weight of sodium chloride). This gives 53592 milligrams of sodium chloride (approximately 54 grams). This can be supplied by 1000 cc. of 5% sodium chloride. It is wise not to give more than 1/3 of this amount then observe its effect and give more if improvement occurs and failure is not accentuated.

HYPOCHLOREMIC ALKALOSIS

This condition occurs when there is a loss of chloride ion in relatively greater quantities than sodium ion. It can result from loss of hydrochloric acid because of vomiting or may occur following repeated injections of mercurial diurectics. The latter leads to excretion of sodium and chloride in equal quantities and since the serum contains less chloride than sodium the final result is a greater reduction in plasma chloride concentration than sodium. The HCO^3 is elevated and the blood pH is increased. The loss of potassium which simultaneously occurs enhances the degree of alkalosis.[31,32]

Patients with hypochloremic alkalosis become unresponsive to mercurial diuretics when the chloride reaches a level of approximately 90 mEq/L.[33] They often develop anorexia, nausea, vomiting, confusion, lethargy, weakness, muscle cramps and oliguria. Tetany may be associated and shallow respiration may be present. Because of the decreased potassium concentration, digitalis intoxication may follow. Hypochloremic alkalosis can be prevented by the administration of chloride in the form of ammonium chloride 5 to 8 grams daily three to four days prior to the injection of a mercurial diuretic. Adequate potassium intake should also be assured. Figure VIII shows the electrolyte pattern resulting from metabolic alkalosis. When the syndrome has developed, it can be corrected by ammonium chloride. If the patient can take oral medication, 6 to 9 grams should be given daily. In extreme cases it can be administered intravenously in a 1% solution at a rate of no more than 100 cc. per hour and not more than 10 grams daily.[21] In addition, potassium should be given in the form of potassium chloride because of the potassium loss from the cells. Alkalosis may not be corrected until this is replaced.[21]

HYPERCHLOREMIC ACIDOSIS

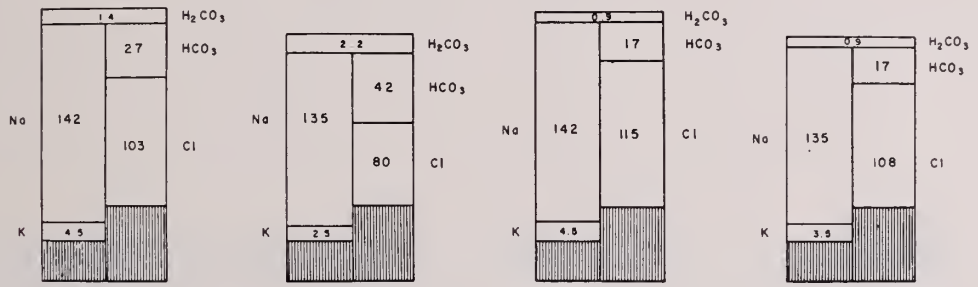
This condition usually results from the excessive administration of ammonium chloride or cation exchange resins to patients with severe congestive heart failure, particularly if renal insufficiency is associated. Diamox may also lower the bicarbonate level and cause the retention of chloride. Potassium depletion is frequently associated because of its loss in the urine combined with chloride, the effect of Diamox or elimination in the gut by the resin.[21] Renal insufficiency may accentuate the acidosis by retention of phosphates and organic acids. Figure VIII shows the electrolyte patterns resulting from metabolic acidosis.

These diagrams show two electrolyte patterns due to metabolic acidosis. In one there is chloride retention without loss of sodium and potassium and in the other sodium and potassium have been lost and chloride has increased. The HCO_3 is decreased in each instance.

Patients with hyperchloremic acidosis develop anorexia, nausea, confusion, weakness and Kussmaul breathing. Signs of dehydration may be associated. The management consists of discontinuing the drug responsible and treating the allied condition.

The administration of sodium bicarbonate, or sodium lactate orally or intravenously may be necessary to correct the biochemical deficit if the patient has severe acidosis. If the HCO_3 is below 15 mEq/L and Kussmaul breathing is present, sufficient sodium lactate should be given intravenously to bring the CO_2 up to approximately 20 mEq/L. This can be done by calculating the deficit and replacing this as follows. For Example: A 70 kilogram man would have 42 liters of total body water. To raise the HCO_3 from 15 mEq/L to 20 mEq/L, 42 times 5 or 210 milliequivalents of sodium lactate would be required. This is supplied by 210 cc. of molar lactate solution. It should be diluted to 600 cc. and given slowly I. V. or such correction can also be effected by 1260 of 1/6 molar lactate solution. In milder cases sodium bicarbonate can be given by mouth. Adequate fluid replacement should be carried out simultaneously and potassium should be administered if there is depletion of this substance also.

Electrolyte Pattern in Hypochloremic Alkalosis and Hyperchloremic Acidosis as Compared with the Normal



Normal | Hypochloremic Alkalosis | A | B | Hyperchloremic Acidosis

Figure VIII

SUMMARY

A resume of the physiological principles of fluid and electrolyte balance in heart failure has been presented. Complications have been discussed and the effects of diuretic therapy reviewed.

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Spinach Overrated As Iron Source

Spinach is no better a source of iron than many other foods. In fact, potatoes, squash, and carrots contain more iron per portion than does spinach, according to Dr. William Bolton, Chicago.

He discussed spinach in his column, "That's a Good Question," in the May Today's Health, an American Medical Association publication. Dr. Bolton is associate editor of the magazine.

He noted that "some years ago spinach received a somewhat exaggerated rating" as an essential food. Now the pendulum has swung the other way.

Spinach contains moderate amounts of vitamin A, as do most green vegetables. It is also "a filling food," with a low calorie content, an important aspect for dieters. When properly cleaned, cooked, and served, it can be a tasty side dish.

Oral Roentgenology of the Gallbladder

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IN NO OTHER FIELD of medicine does the clinician depend as heavily upon the roentgenologist as in diseases of the gallbladder. The roentgenologist cannot take this trust lightly. Depending upon him in no small measure, the patient will have prompt diagnosis and remedy of his gallbladder ailment, no real relief, or worse, unnecessary surgery.

The modern radiologic exploration of the gallbladder is extremely accurate[1]. I know of no test in clinical medicine that materially exceeds it when properly done, especially in regard to the presence of stones. Examples of the roentgenology of the gallbladder as encountered in this small surburban hospital will be offered herewith. The dyskinetic disorders cannot be discussed rationally because these rest on no secure radio-pathologic basis.



Fig. 1A—Unequivocal ulcer in gastric antrum. Clinical diagnosis: gallbladder disease.



Fig. 1B—Many small gallstones. Stomach and duodenum normal. Clinical diagnosis: peptic ulcer.



Fig. 1C—Few small gallstones. Clinical diagnosis: hiatal hernia.

What is the proper conduct of the gallbladder examination? The contrast medium (our modern substances are not dyes) must have been ingested, it must have reached the small intestine, absorption from the small intestine must have been satisfactory, liver function must have been adequate to excrete the medium into the bile, and there must have been free access of this contrast-laden bile into the gallbladder. If any link of this chain is broken, the examination is not reliable.

Telepaque (6 tablets) is taken the night before in accordance with the manufacturer's directions on the packets. Nothing by mouth is allowed the following morning. The patient is fluoroscoped, and usually four spot-films are made with the patient upright in varying degrees of rotation, and with varying degrees of compression. These are immediately developed in order to determine whether a fatty meal is required, and the second part of the examination, namely, the gastro-intestinal series, is immediately undertaken while waiting. The fatty meal, if needed, is done after the gastro-intestinal series. I cannot overemphasize the importance of combining the examinations of the gallbladder and upper gastro-intestinal tract. I believe that a clinical differential diagnosis between ulcer and gallbladder disease may be practically impossible, especially in middle-aged women.

Mrs. A. was referred for a combined study with a clinical evaluation, according to probability; ulcer 10%, gallbladder 90%, functional 0%. An unequivocal ulcer in the gastric antrum (Fig. 1A) was found. The gallbladder was completely normal. Mrs. E. was referred with this clinical evaluation: ulcer 60%, gallbladder disease 15%, functional 25%. Note the profusion of gallstones and the completely normal upper intestinal tract (Fig. 1B). She was made well by cholecystectomy. Mrs. N. complained of substernal discomfort, regurgitation especially when supine, and pain referred to her throat and down the left arm. Her physician was so certain that a hiatal hernia was present that the gallbladder series was omitted. The gastro-intestinal series was normal. Before referral for esophagoscopy, it was thought wise to do a gallbladder series for the sake of completion. Note the small stones (Fig. 1C).

Presented at the meeting of the Tri-State Medical Society, February 18, 1958, Richmond.





Fig. 2A—Patient horizontal: gallbladder normal. Fig. 2B—Patient upright: small stones detected in fundus

An equally compelling reason for the combined studies is the not unusual association of gallbladder disease with peptic ulcer. One series of proved abnormal gallbladders showed an association of 8[illegible]%. My experience confirms this. Lymphatic intercommunication has been suggested as a possible explanation for associated disease[3]. The separately executed gastro-intestinal and gallbladder series, therefore, except in very special cases, is unusual in my department.

In the event that the gallbladder is not visualized readily under the fluoroscope, the gastro-intestinal series is completed, additional gallbladder medium is given the patient, and he returns the following morning for a second examination. If again the gallbladder is not visualized, films are made with the patient horizontal and the tube overhead in the hope of demonstrating stones that were not visualized fluoroscopically. If visualization is faint, a third dose is given. This special fluoroscopic examination should not be done except wth a rotating anode, fine-focus tube (1). A gallbladder examination consisting only of films made with the patient horizontal is no longer acceptable (Fig. 2).

What is the significance of the fatty meal? It is required in my opinion in less than one-third of the patients. If the upper reaches of the gallbladder are poor in contrast medium because of gravitational force, the fatty meal is given in the hope of replacing the less dense bile with the more dense bile from the fundus and demonstrating non-calculous filling de fects in the infundibulum (Fig. 3). Stones are prac tically always seen without the aid of the fatty meal, but their definition may occasionally be enhanced with its use. The film after a fatty meal is said to improve the visualization of the Rokitansky-Aschoff





Fig. 3A—Before the fatty meal: normal gallbladder, but density proximally is poor due to gravity.

Fig. 3B—After the fatty meal: non-calculous filling defect elicited by improving the density of the upper reaches.



Fig. 4A—Fine layering of gallstones.



Fig. 4B—Layering no longer seen. ? Minute difference in technical factors, or concentration of bile.

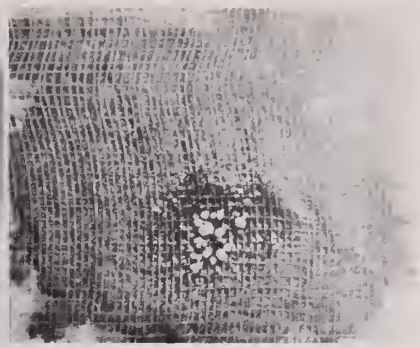


Fig. 4C—Photograph of surgical specimen. Size of stones apparent from comparison with surgical gauze used as strainer.

sinuses (see below). My one example of this condition was visualized better *before* the fatty meal. Many of the gallbladders showing this rare state have a segmental constriction proximal to the sinuses. The significance of contraction is discussed below.

What is the significance of the findings elicited in such a gallbladder examination?

1. *Stones:* This method allows the demonstration of stones in the range of 2 mm. (Fig. 4). Stones of this diameter would be completely lost in the older type of examination with the patient horizontal and the tube overhead. In my opinion, the upright view is even more effective in demonstrating stones than the right lateral decubitus view devised by the late Dr. B. R. Kirklin (Fig. 5).

After the roentgenologist has demonstrated and described the stones, the next step is the clinician's. All things being equal, stones represent an indication for surgery. The silent stone if the patient lives long enough has a good chance of becoming a vocal stone.

2. *Non-calculous filling defects:* These are divisible into four groups:

A. Metabolic (focal cholesterolosis): (Figs. 6 & 7). Multiplicity of lesions, sharpness of contour, small size, sparing of the fundus, and good concentration are all characteristic. Several of our patients have been completely relieved of symptoms by the removal of these non-calculous gallbladders containing small cholesterol polyps. Severance of these polyps into the lumen of the gallbladder causing symptoms



Fig. 5A—Filling defects in right lateral decubitus view. Falsely positive, due to overlying intestinal gas.



Fig. 5B—True representation of stones with patient upright.



Fig. 6A—Focal cholesterolosis.



Fig. 6B—Focal cholesterolosis.

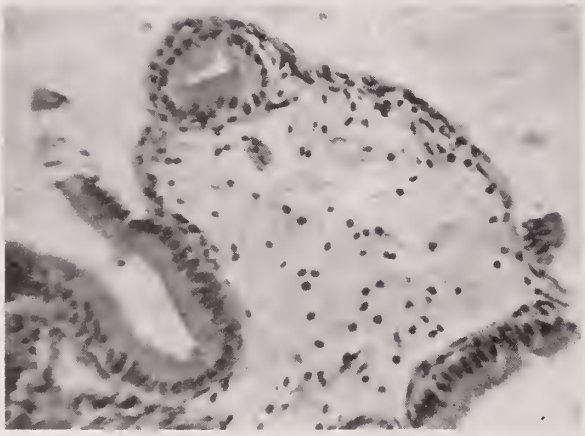


Fig. 7—Microscopic appearance of cholesterolosis. Note the sub-epithelial foam-cells.

by being extruded down the biliary tract, or forming a nidus for later stones, seems a most likely event.

B. Inflammatory: Intraluminal masses of hyperplastic mucosa resulting from the stimulus of chronic infection may be noted. Or, the proliferation of the mucosa may be directed externally into the wall of the gallbladder, forming the so-called Rokitansky-Aschoff sinuses. These also are an indication for surgery. (Fig. 8).

C. Neoplastic: The lesions are usually single, and may be either mesenchymal such as fibroma or lipoma, or the much more important epithelial tumors, either pre-malignant such as adenoma or papilloma,



Fig. 8A—Discontinuous rim of contrast material outside the lumen indicates Rokitansky-Aschoff sinuses.

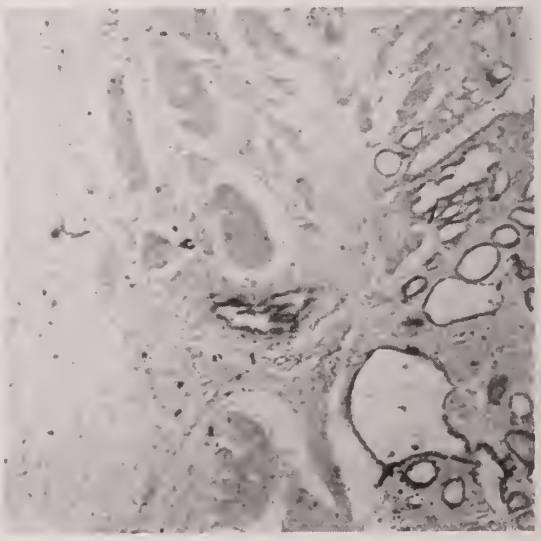


Fig. 8B—Microscopic section shows these sinuses infiltrating the wall, a proliferative response to chronic infection.



Fig. 9—Frank adenocarcinoma visualized in well-filled gallbladder. A rare event, but indicating the need for surgery in all non-calculous filling defects.

or frankly carcinomatous. (Fig. 9). Visualizing the cancer in a well filled gallbladder is a rare event.

D. Malformations: The hemispherical lesion arising from the fundus of the gallbladder is the best example of this. The actual pathogenesis[4,5] is uncertain, but has been related by various observers to infection, heterotopia, neoplasm, and disordered orientation of the end-cells in the gallbladder bud. (Fig. 10). Figure 11 represents aberrant pancreas, a true heterotopia[6].

It is clear, therefore, that while a differential diagnosis may be attempted on the basis of number of lesions, size, sharpness, position within the gall-



Fig. 10—Hemispherical defect in fundus of gallbladder: adenomyosis.



Fig. 11—Non-specific filling defect: aberrant pancreas.

bladder, state of gallbladder concentration, none of these diagnostic criteria is sufficiently accurate to justify the risk of missing a potentially or frankly malignant lesion. Therefore, all non-calculous filling defects constitute an adequate indication for surgery.

3. *Gas in the gallbladder:* This has several causes[7]: iatrogenic or natural communication between the biliary tree and gastro-intestinal tract, gas-producing infection within the gallbladder, and incompetence of the sphincter of Oddi following passage of stones via the common duct (Fig. 12).

4. *Poor Concentration:* This diagnosis should indeed be an unusual one. Its frequent use is a screen for an incomplete examination. Usually the concentration can be reinforced so that the presence or absence of stones may be determined. This patient



Fig. 12—Gas in gallbladder probably following spontaneous passage of small stones through common duct.



Fig. 13A—First day, first dose: no filling; Second day, second dose: poor filling.



Fig. 13B—Third day, third dose: stones easily visualized. How much more satisfactory is this report than "poor concentration"!

had three consecutive gallbladder examinations in as many days (Fig. 13). It is true that there is an occasional patient whose concentration remains poor, and this causes the conscientious radiologist worry. It should be noted that intramural inflammatory changes bear a statistically valid relationship to the concentration: that is, there are greater chances of cholecystitis in 100 poorly concentrating gallbladders than in 100 normally concentrating gallbladders. However, the differential is not adequately wide to constitute a valid criterion for diagnosing cholecystitis in the individual patient[8].

5. *Poor Contraction:* Although contraction of the gallbladder after a fatty meal occurs in almost 100% of healthy people, and in only 67% of diseased gallbladders, this differential is again too wide to apply in the individual patient[9]. The emotional state, habitus, nutrition, autonomic tonus all are factors in determining the degree of contraction. Therefore, little importance should be put in lack of contraction of a well filled gallbladder. Indeed, the gallbladder may remain well filled for several days (*image de renfort, Dauerngallenblase*) with little apparent change in volume from day to day, so efficient is the internal circulation of our modern contrast agents. I know of one patient whose gallbladder shadow was so persistent that it was considered an example of "milk of calcium"; surgery disclosed a normal structure[10].

The combination of poor contraction and poor concentration, following every possible effort to reinforce the latter with the additive method as outlined above, might justify venturing the roentgenologic diagnosis of cholecystitis when associated with supporting clinical data.

6. *No Visualization:* If the extra-biliary factors have been properly judged, and the examination has been repeated especially after a fat-heavy lunch designed to evacuate the gallbladder of its thick bile thereby allowing fresh, contrast-laden bile to fill the structure, non-visualization is a very reliable sign of abnormal gallbladder. Gallstones will be found in the majority of these patients, and the remainder will have severe inflammatory changes.

From the foregoing, it is evident that the roentgenologic report of the gallbladder examination in the overwhelming majority of patients should be one of these three:

1. Normally concentrating gallbladder with or without stones.
2. Non-visualized gallbladder with or without demonstrable stones.
3. Suboptimally concentrating gallbladder *with* stones. (Concentration not adequate to exclude stones even following the additive technique is equivalent to non-visualization. Suboptimally concentrating gallbladder *without* stones should be an unusual diagnosis.)

The diagnoses of "sluggish gallbladder", "poorly concentrating gallbladder", invite only trouble.

SUMMARY

1. The properly executed gallbladder examination is unexcelled in accuracy, especially in regard to the

presence of stones. That technique with the patient horizontal and ray vertical is no longer acceptable.

2. The gallbladder and gastro-intestinal studies should be done as a rule at the same time because of the impossibility of a clinical differential diagnosis in certain patients, especially middle-aged women, and because of the tendency for co-existing disease in the two systems.

3. The fatty meal is of limited importance in the gallbladder examination. It should be used (A) in an effort to detect non-calculous filling defects in the infundibulum when the density in this segment is suboptimal because of gravity, and (B) when there is a suspicion of Rokitansky-Aschoff sinuses in the gallbladder with segmental constriction and with poorly defined contours. Determination of the degree of contraction following the fatty meal is of limited value; the diagnosis of "sluggish gallbladder" is unsatisfactory.

4. Diagnosis of "poor-concentration" can largely be avoided by the additive technique.

5. All non-calculous filling defects in the gallbladder constitute an adequate indication for surgery, lest a potentially or frankly malignant lesion be missed.

6. One of these three will constitute the majority of roentgenologic reports of the gallbladder series:

A. Normally concentrating gallbladder with or without stones.

B. Non-visualized gallbladder with or without demonstrable stones.

C. Suboptimally concentrating gallbladder with stones.

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Tubeless Gastric Analysis

A new study has shown that the tubeless gastric analysis technique is reliable in the presence of disease previously thought to make it useless. Drs. Theodore Rodman, Arnold Gutman, and Ralph M. Myerson, Veterans Administration Hospital, Philadelphia, said the technique works even when the patient has heart disease, miscellaneous other diseases, and mild to moderately severe liver and kidney diseases.

The gastric analysis test, which detects the presence or absence of hydrochloric acid in the stomach, is used in diagnosing various gastric disorders. In the tubeless technique, an organic dye is swallowed. A color test of the urine indicates the presence or absence of acid. In the standard test the patient swallows a tube, through which stomach contents are drawn.

In the new study, reported in the May 10th Journal of the American Medical Association, 114 patients were given the tubeless test, which was followed by a standard test.

There were seven false ractions with the tubeless test among 26 patients with kidney disease, and one false reaction among 39 patients with liver disease. The tubeless test was accurate among patients with heart and circulatory disease, gastrointestinal disease, and such miscellaneous conditions as pernicious anemia, multiple sclerosis and diabetes.

Because of its simplicity and low incidence of false reactions, tubeless gastric analysis is well suited for early screening of gastric achlorhydria.

Some Common Insecticide Poisonings

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DDT, Chlordane, and Parathion are among the more common and effective insecticides that may find their way into our homes this summer. DDT and Chlordane are chlorinated hydrocarbons, and Parathion is an organic phosphate ester; these differ widely in mode of action and acute toxicity.

DDT

SYNONYMS: (dichloro diphenyl trichloroethane or 2, 2, bis p-chlorophenyl, 1, 1, 1, trichloroethane).

PROPERTIES: White crystalline, not very soluble in water, neutral, MP 109° C. DDT is stored in body fat and is eliminated slowly.

AVAILABLE: 10% in talc; 5% in kerosene, wettable 50% powder.

MLD: About 15 gms. for 150 pound adult.

SIGNS AND SYMPTOMS: Acts on the central nervous system. Symptoms may appear within one hour after inhalation or ingestion and may be manifested by nausea, vomiting, diarrhea, mental anxiety, giddiness, sore throat, stiffness and pain in jaw, tremors, numbness and partial paralysis of extremities, hyperactive knee jerk, loss of vibratory sensation of the extremities, possible liver and kidney damage, delirium, convulsions, respiratory difficulty, pulmonary edema, collapse and death.

SUGGESTED TREATMENT: Emetics or gastric lavage, and saline laxatives such as sodium sulfate (15 gms). Avoid oil or fats. Avoid epinephrine! Control convulsions with short acting barbiturates such as secobarbital or pentobarbital. Prone-styl or dibenamine for ventricular arrhythmias. Quiet and rest is especially necessary. High protein and glucose diet, methionine and vitamin B complex for liver damage. Adequate fluid intake, and maintain electrolyte balance.

CHLORDANE

SYNONYMS: Octa klor, 1068, octachloro tetrahydro methanoindane.

PROPERTIES: White powder, insoluble in water.

MLD: About 8 gms. (more toxic than DDT), for 150 pound adult.

SIGNS AND SYMPTOMS: Absorbed through all portals including skin. Central nervous system stimulant, neurologic signs, anorexia, possible liver and kidney damage, hyperexcitability, tremors, convulsions, respiratory failure, collapse, death.

SUGGESTED TREATMENT: Use gloves while treating.
Wash all exposed areas with soap and water.
Emetics, and gastric lavage.
Avoid fat or oil demulcents.
Avoid epinephrine!
Control convulsions with short acting barbiturates such as secobarbital or pentobarbital (with caution).
Quiet and rest is especially necessary.
Supportive treatment for possible liver and kidney involvement.

PARATHION

SYNONYMS: Thiophos, Niran, E-605, Diethyl-p-nitrophenyl thio phosphate.

PROPERTIES: Yellow brown liquid, organic phosphate ester, insoluble in water, kerosene or benzine. Soluble in alcohol, acetone and xylene.

MLD: Very toxic, about 15 mg. for 150 pound adult.

REMARKS: Produce same symptoms and require same treatment as DFP, TEPP, HETP, "nervous poisons". Death usually within 1/2 to 4 hours, but may occur within 10 minutes.
Absorbed through all portals including skin. Parasympathomimetic effects.

SIGNS AND SYMPTOMS: Parathion like other organic phos-

phates is an irreversible inhibitor of cholinesterase, and allows accumulation of acetylcholine. Loss of depth perception, headache, giddiness, blurred vision, inability to focus distant objects, these symptoms may last for several days; cramps, diarrhea, pain in chest, dyspnea, bronchial spasm, general weakness, nausea, vomiting. Parasympathomimetic signs such as: sweating, salivation, miosis, tearing, cyanosis, convulsions, coma, loss of reflexes and sphincter control. Respiratory failure, generalized collapse, death.

IDENTIFICATION: Determine cholinesterase activity of blood.

SUGGESTED TREATMENT: Keep patient fully atropinized, I. V., during entire crisis. 1 to 2 mg. every hour up to 10 to 20 mg. on 1st day. This especially for control of respiratory symptoms.

Avoid morphine!

Use gloves when giving treatment. Remove all clothing; wash skin with soap and water (or water and sodium bicarbonate) if there is skin contact.

Induce vomiting, gastric lavage. (If stomach is distended, use Levine tube.)

Oxygen therapy and artificial respiration as needed.

Keep patient quiet and comfortable.

Watch patient constantly, for need of artificial respiration may develop suddenly.

Acute emergency may last 24 to 48 hours.

Favorable response to one dose of atropine does not guarantee against sudden and fatal relapse.

Atropine must be continued during entire emergency.

PAM (pyridine-2-aldoxime) or DAM (diacetyl monoxime), 2,000 mg. IV (5-to-10 minutes) and repeat again in 20 minutes, plus the atropine therapy, has been recently suggested as a means actually reversing, in man, the cholinesterase inhibition and neuromuscular block caused by the organic phosphate ester.

Other related organic phosphates that act in a similar manner:

DFP—Diisopropyl fluoro phosphate
DDVP—Dimethyl dichloro vinyl phosphate
HETP—Hexa ethyl tetra phosphate
OMPA—Octa methyl phosphoramide
TEPP—Tetra ethyl pyro phosphate

Other organic phosphate insecticides that are relatively much less toxic than Parathion:

Diazinon
Dipterex
Chlorthion
Malathion

KEROSENE

Kerosene is usually the vehicle for insecticides; and in some instances it is even more toxic to man than is the so-called active ingredient (such as rotenone or pyrethrum). Kerosene is also commonly used as fuel or industrial solvent.

SUGGESTED TREATMENT: Emetics or indiscriminate gastric lavage should be avoided for fear of aspiration. *Very careful* gastric lavage may be performed when large amounts have been ingested, as a precaution against regurgitation and aspiration due to involuntary gagging or coughing. Oxygen therapy and artificial respiration if indicated. Antibiotics to prevent secondary infection. Avoid fats or oils, demulcents such as crushed bananas or white of egg should be used instead. Saline cathartics (15 gms. sodium sulfate). Ice packs or sponge baths to reduce elevated body temperature. Supportive measures against possible liver or kidney involvement.

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This is one of seasonal articles on common poisonings which will be published in the Monthly from time to time.

It is prepared by Dr. Kaye in collaboration with the Richmond Poison Information Center.

Use of Electric Stimulation in Resuscitation: A Reminder

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SINCE ABOUT 1949 a new method of treatment of drug poisoning involving acute respiratory depression has been available, but still seems often to be bypassed or overlooked. The treatment referred to is the application of a pulsating unidirectional electric current to force respiration.

Previous treatment has not been entirely satisfactory. Picrotoxin, a mainstay of treatment, is a valuable drug but is toxic, and itself may produce convulsions. Oxygen is still indispensable, as is the removal of any drugs unabsorbed. These measures are often inadequate, however, and deaths from acute respiratory depression still occur far too often. The advent of electric shock therapy about 1938 has eventually led to the discovery of a most effective treatment for toxic respiratory depression. In the search for better methods of shock therapy in mental disorders some workers have discarded ordinary sine wave alternating current for a pulsating uni-directional current which has certain advantages. In the use of such a current it was accidentally found that where waves forms and frequencies were of a certain type, respiration could be tremendously stimulated. The form which has the strongest stimulating effect is a pulsating current consisting of groups of spikes of quite high voltage of only 3 to 4.2 milliseconds each. Although the spikes may run as high as 480 volts, their duration is so brief that an average current flow is only 2 to 3 milliamperes.

The technique of treatment is relatively simple. The electrodes through which the current is applied can be placed bitemporally as in conventional shock therapy, but it is advantageous to have movable electrodes because the most efficient site of application may vary. It will often be found to be 2 inches or more above the outer canthi.

A typical case of the successful use of this method is as follows:

A 63 year old female was admitted to a private psychiatric hospital at 4 P.M. She was known to have been alcoholic and also to have been prone to take barbiturates and other drugs. She apparently had had some hypodermic medication just before being brought to the hospital, just about an hour's drive. A consulting internist, who was present at the moment of admission, noted that respirations were not more than four a minute and gasping in type. The chest, lips, nail beds and ear lobes were quite cyanotic. Blood pressure was 60/?, pulse was impalpable. Pupils were pin point. In fact, she appeared to be practically dying. She was given 5 cubic centimeters of Coramine intravenously, oxygen by mask, and artificial respiration. These measures proved inadequate and she grew worse. Her condition was judged to be one of barbiturate intoxication. She may also have had some narcotic. 30-minutes after admission, the electric stimulation was started. The average current maintained was about 2 milliamperes, but occasional bursts of 5 to 10 milliamperes were needed for a few seconds every 3 to 4 minutes to force breathing when it showed signs of stopping. After two hours of continuous stimulation, her color was good; pulse rate was 100 and of good quality, blood pressure was 100/60; and she was reacting to the point of groping toward the electrodes and mumbling, "I can't stand that." Oxygen was discontinued and her color remained good. Mild stimulation was continued for three hours more, at which time it was stopped. The patient grew more alert and later in the night sat up and talked. There were no further complications.

This case is cited because the above form of treatment appears definitely superior to any others, a fact that has not been called to the attention of the profession with sufficient emphasis. Early reports of this method are listed below, and in later years a considerable bibliography was accumulated.

The apparatus used is widely available. Most psychiatric hospitals have it as well as many psychiatrists in private practice. Were there enough demand, a machine could be simplified to produce only this one type of current for resuscitation. The instrument used above was built by Reuben Reiter of New York. Other manufacturers also build apparatus which can deliver a similar current.

This treatment has been most widely used in acute barbiturate poisoning. It has, however, also been reported to be a life saving measure in treating over-

dosage of practically any drug wherein the mechanism of death is acute suppression of respiration.

It is hoped that this form of treatment, the efficiency of which is now well established, will receive more attention by the profession.

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Exercise in Fitness

The role of exercise in maintaining fitness was outlined today by a joint committee of the American Medical Association and the American Association for Health, Physical Education and Recreation.

Appearing in the April 5 A.M.A. Journal, the joint statement pointed out that an individual's ultimate performance is limited by the physiological capacity of the body systems involved. However, the living body is "responsive to training" and operates under wide margins of safety.

A child or youth requires more exercise than an adult because of growth needs. If an individual has been active throughout childhood and youth, maximum fitness is achieved earlier, and, in adulthood, decline of fitness is postponed.

Age, in itself, is not a contraindication to exercise. Precluding accidents, a healthy person will not do himself any permanent injury by "rational physical activity."

"The range of individual variation in capacity for exercise is considerable." "Some persons, even at an early age, recover poorly from breathlessness, general fatigue, or feelings of exhaustion. . . . Attempts to modify these responses through planned exercise should proceed slowly under medical supervision."

Other points made by the statement include:

—Usually an individual reduces or stops his exercise long before physiological limits are reached—when feelings of breathlessness, general weakness, or muscular discomfort occur. These subjective factors are psychological rather than physiological in nature.

—Athletes who learn to carry their activity beyond the "so-called psychological quitting time" sometimes experience a "second wind" which represents a physiological adjustment to continuing exercise. This shift in limitations is generally regarded as one of the most important results of training.

—Hard, fast sustained or highly competitive games and sports should not be played by persons beyond the age of 30 unless they have maintained or can attain by systematic training an appropriate state of fitness.

—Persons who are out of training should not attempt to keep pace in any vigorous sports with persons who are properly conditioned and accustomed to regular participation in that sport.

—Being in condition for one sport does not always mean being in condition for another.

—The ability to recuperate after physical activity is a good guide to the desirable severity of exercise at any age. Recuperation should be reasonably prompt.

—Exercise is too severe or too prolonged for a person in his present stage of training and physical strength if breathlessness and pounding of the heart are still noticeable 10 minutes after exercise; marked weakness or fatigue persists after a two-hour rest period; a broken night's sleep is attributable to exercise, or a sense of definite and undue fatigue remains the next day.

—The vigor with which an individual participates in an activity will have more to do with the outcome for fitness than the activities or events in which he elects to participate.

Cat Scratch Fever

A Case Report

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ON SEPTEMBER 14, 1957, Mr. C.L.M., white, male, age 29 years, was treated by me for cat scratches over his left hand, wrist and forearm. He was given ATS and antiseptic dressings. The lesions healed promptly and completely within a few days.

On November 29, 1957—two and one-half months later—Mr. M. came to my office complaining of pain and swelling in his left axilla and he had slight fever. He noticed the swelling a few days before he came to see me, having been seen by his company physician, who, not knowing about the cat scratches, did not consider the lesion significant.

On November 30, 1957, under sodium-pentothal anesthesia, the axilla was cleanly dissected, removing a conglomerate mass of swollen lymph glands—suppuration being present in at least one of these glands—and axillary fat. The incision was closed over a small penrose drain. The patient had a temperature of 100 to 101 dregrees for three days, and none thereafter. The wound drained freely—a thin lymphatic type of fluid, until the drain was removed on the tenth post-operative day, when it ceased suddenly and completely. The patient returned to work having lost only two weeks.

I did not test this case with antigen because the history of cat scratches was typical and I did not know where to get the antigen.

Dr. David F. Merten has a very excellent and complete review of Cat Scratch disease in the June 1957 Virginia Medical Monthly. However, he apparently had not seen an article by Drs. Wilfred T. Small and Ronald C. Sniffen of Worcester, Massachusetts, who reported seven cases of Cat Scratch disease in the New England Medical Journal on November 29, 1956. They reported six of these cases cured promptly by surgical excision and they recommend closure of the wound without drainage. The seventh case was not operated on because of the location of the disease in the preauricular glands and because it was thought that recovery was taking place since the parents felt that the glands had become smaller. However, in this case, they report that suppuration

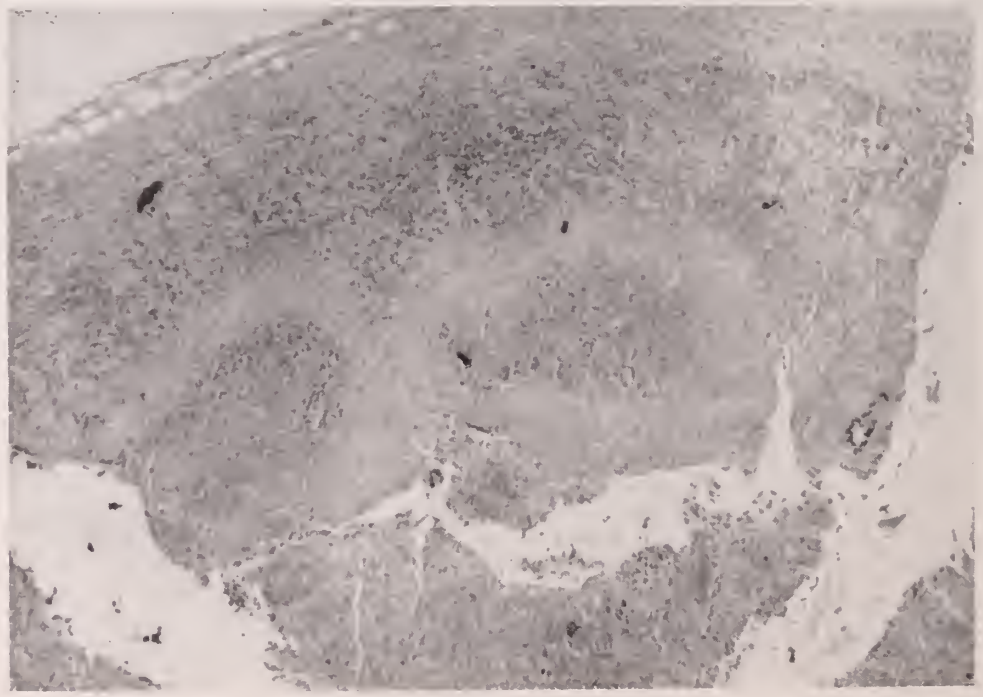


Figure 1

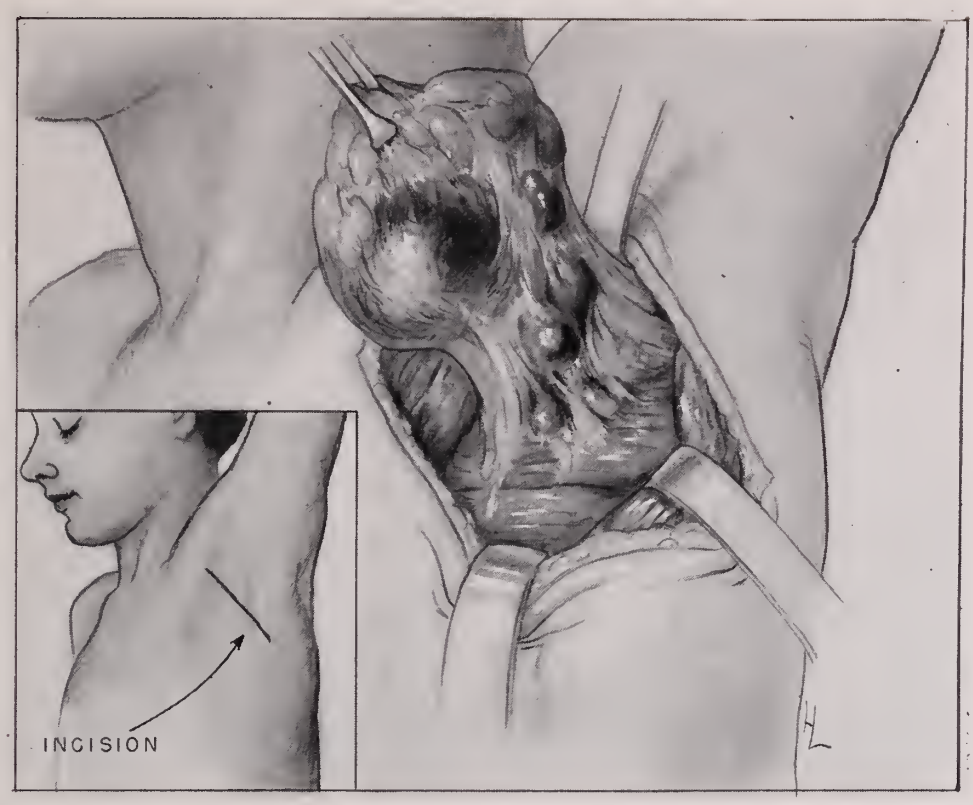


Figure 2

and drainage did occur and the patient was ill for several months.

I have a personal communication from Dr. Small in which he states that he has had several more cases since his publication—all operated on with satisfactory results. He stresses the importance of complete excision and closure without drainage. His results certainly prove he is right.

I am reporting this case because I believe this disease is more prevalent than it is thought to be and that it is possible cases are going unrecognized. Also, I mentioned this case to some of my colleagues who stated that the disease is self-limited and no treatment is indicated. That this is a fallacy is proved by Dr. Small's result and supported by my case.

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Films Available

A revised list of films available through the A.M.A. motion picture library has been prepared and copies are available upon request from Motion Pictures and Medical Television of the American Medical Association. This catalog lists 87 medical films suitable for showing to medical societies, hospital staff meetings and other scientific groups. This catalog also includes 57 health films of interest to physicians who may be called upon to speak before lay audiences such as service organizations, Parent-Teachers' Associations, etc.

Chronic Appendicitis—Myth or Malady?

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VESALIUS first described the vermiform appendix. It was given its name by Vidius in the sixteenth century. Prior to the appearance on the scene of Reginald Fitz, many investigators had written very illuminating and clear-cut descriptions of the relationship between perforation of the appendix and right iliac abscess, peritonitis, etc. However, it was Fitz who sorted out the pertinent points from the maze of half-truths and crystalized our modern conception of acute appendicitis and its complications. Fitz's paper was entitled, "Perforating Inflammation of the Vermiform Appendix", and it was read at the initial meeting of the Association of American Physicians, June 17, 1886, at Washington, D. C. Osler described Fitz's paper as being, "Of the first rank making memorable that inaugural meeting of the Association of American Physicians as the coming of age party of clinical medicine in America."

Since 1886, literally tons of material have been written about the appendix. Most of this literature has been devoted to acute appendicitis and its complications. "Chronic appendicitis" has also been dealt with at great length and perhaps an apology is in order for bringing up such a hackneyed subject. However, there is no agreement concerning what this condition is, and, as a matter of fact, many writers and teachers contend that the condition does not exist at all. It is true that in the purest clinico-pathological concepts it is a myth since there is little correlation between clinical results and the findings of the pathologist. Concerning chronic appendicitis in the second edition of Christopher's Surgery, Dean Lewis and Warfield M. Firor state, "It is unfortunate that this term has been used in medical circles, for there has never been any agreement as to what constitutes the clinical picture resulting from so-called chronic appendicitis and, moreover, there is no such pathologic entity." They estimate that appendectomy relieves the symptoms in only about one-half of the patients in whom a diagnosis of chronic appendicitis is made. These statements illustrate quite well that a diagnostic yardstick is needed and that in dealing with a patient with a vague pain in the right side, a rigid surgical conscience must be maintained if one is to avoid criticism and poor surgical results. All of us have heard such meaningful expressions as "acute remunerative appendicitis". Nevertheless, the fact remains that a large percentage of patients with a chronic recurrent pain in the right side are permanently relieved by appendectomy. Until a better term is invented, this situation will continue to be called "chronic appendicitis".

An excellent treatise on this subject was given by Alvarez[1] and was entitled, "When Should One Operate For Chronic Appendicitis." He interviewed three hundred eighty-five Mayo Clinic patients who had undergone appendectomies elsewhere. The patients were asked if they had ever had on one or more occasions attacks of abdominal pain around the navel or in the right lower quadrant; pain severe enough to put them to bed, to keep them awake much of the night and to cause the attending physician to diagnose or greatly suspect appendicitis. Two hundred fifty-five patients gave no such history and only two of these were relieved by operation. Twenty-four per cent were made decidedly worse. Twenty were operated on because of a roentgenologic diagnosis of appendicitis and none of these were helped by the removal of the organ. The commonest reason for operating was the type of abdominal discomfort which goes often with constitutional inadequacy, chronic fatigue, a nervous breakdown, or a psychopathic makeup. Other common causes for operating were a duodenal ulcer or ulcer-like symptoms, migraine, functional diarrhea, a sensitive colon, nervous regurgitation, gall bladder disease, a sore liver, spondylitis, food sensitiveness, renal colic, constipation and gynecologic conditions. In the one hundred thirty cases who had a history of one or more attacks of something resembling appendicitis, sixty seven percent were apparently cured, twenty-five percent were helped or relieved for a few years, while five percent felt that they were no better and twenty-five percent were worse.

Out of curiosity I decided to investigate how some of the patients of my associates, Drs. Siersema and Hill, and myself had fared who had had their appendices removed for appendicitis and who were found at operation not to have had acute appendicitis. Accordingly, one hundred fifty charts were pulled at random of patients who had had appendectomies without associated unrelated procedures and

in each of whom the appendix was reported by the pathologist to be "normal," to show "scarring of the appendix," "chronic appendicitis," "lymphoid hyperplasia of the appendix," "intestinal parasite of the appendix," or "fecolith appendix." All of these are unremarkable findings that may be encountered in any routine autopsy series. A return postal card was sent to each patient. It read, "The symptoms for which I underwent removal of the appendix have since operation been: (a) completely relieved (b) partially relieved (c) not relieved at all, and (d) aggravated." No case had been done during the preceding twelve months. Obviously, no iron-bound conclusions can be drawn from such a small series unless it be that December is a poor month to put such inquiries in the mail since of the one hundred fifty cards sent out, only fifty-two were returned. However, the results in these are interesting. Of the fifty-two reporting, forty-two, or eighty-seven per cent, were completely relieved, six were partially relieved, two obtained no relief and two were aggravated. A review of these fifty-two charts revealed that of the forty-two who obtained complete relief. twenty-three had had previous attacks, six had had no previous attacks and in thirteen cases, this information was not in the chart. Of the six who obtained partial relief, one had had a previous attack and five had had none. Both of the patients who obtained no relief had had previous attacks as had both who said their symptoms had been aggravated. In some of the series, the initial clinical diagnosis had been acute appendicitis although most of them had been called preoperatively "chronic recurring appendicitis". Thus, this small series would seem to agree with the larger one of Dr. Alvarez which indicated that one is on thin ice when he makes the diagnosis "chronic appendicitis" unless the patient has had previous attacks of right-sided pain suggesting appendicitis and preferably, has had many such attacks. Even then, numerous other factors must be considered and evaluated before recommending surgery.

In conclusion, may I reiterate that although "chronic appendicitis" may be a myth in the Pathology Laboratory, clinically, it is a diagnosis to be made actually by a process of elimination; and in retrospect, it is an acceptable final diagnosis to be made on a patient who had had repeated attacks resembling appendicitis, in whom all studies were non-contributory and who obtained complete relief following appendectomy even though the appendix proved to be histologically not remarkable.

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Anemia in Infants

The number of infants and small children who develop iron deficiency anemia continues to be a "shocking public health problem". However, the blood disorder can be prevented if the susceptible infants are recognized and given extra iron, Dr. Calvin W. Woodruff, Nashville, said in the June 7 Journal of the American Medical Association. Iron is necessary for the production of red blood cells.

During a three-year period, he studied 272 anemic children under the age of five years at a clinic associated with Vanderbilt University School of Medicine. The most significant factors in predisposing a child to anemia were low birth weight, high birth order, twinning, and masculinity. A diet poor in iron did not appear to cause anemia, since these children ate the same diet as did other children who did not become anemic. Prematurity or low birth weight was the most common factor. Premature infants tend to grow faster during the first year of life than do full-term infants, thus requiring larger amounts of iron. Boys also grow more rapidly during the first year of life than do girls.

Twenty-six of the infants were twins. Both members of nine pairs were anemic; only one member was anemic in eight instances. Twenty of the twins were premature on the basis of birth weight.

The study also showed that the incidence of anemia in white infants increased as birth order increased, reaching a peak with the fourth-born infant. In Negro infants, the peak was for second-born infants.

There is also a factor of deficient iron stores at birth, resulting from blood loss during delivery or because the mother is anemic.

Pre-Paid Medical Care....

Edited by
RICHARD J. ACKART, M.D.

The issue of *The New England Journal of Medicine* which was published April 3, 1958, featured a "Letter To The Editor" about Blue Shield problems. Its astute analysis of the medical profession's situation in these changing times prompted an editorial commentary which was equally perceptive. When agreeing that the Monthly might reproduce his letter, Dr. Bradford, an orthopedic surgeon who is in private practice, especially requested that an explanatory introduction to the letter be most perfunctory concerning its author—"Whenever there is much personal comment, I wonder whether the individual is promoting himself or his ideas". This much we know—after reading these two articles—both Dr. Bradford and the *Journal's* editor have ideas which are indeed worthy of promotion.

R.J.A.

Blue Shield Problems

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So much time is being devoted nowadays to discussions of Blue Shield policies that it would seem appropriate to stand off and take a long-range view of the matter; or, as the French say, "reculer pour mieux sauter"—that is, to draw back to jump better.

Three basic questions will come to mind when the problem is considered in this way. What position does the medical profession as a whole occupy in the changing social, economic, and political patterns of today? What part does Blue Shield play in these patterns? How effective is this part likely to be in the future?

There need be no ambiguity in defining the present position of the medical profession. It can be summarized in a single word: untenable. Such an assertion hardly invites argument. The experience of practically every other nation in the world corroborates it. Where else do we see the private practice of medicine continuing?

On one side, we find ourselves threatened by state and federal programs already operating on a large scale and eagerly seeking still further enlargement. On the other side, we contemplate the ugly possibility of domination by pressure groups such as labor unions or dictation from commercial interests such as insurance companies, to mention only two of many contenders. In front of us we face the inescapable and insurmountable wall of rising costs, in which doctors' fees play only an insignificant part as compared to the staggering costs of hospitalization. Behind us we hear the hue and cry of an increasingly hostile public opinion, unleashed and led on by demagogues who clamor for the priceless gifts of life and health at bargain rates and at the taxpayers' expense. As we fare forth into this dark and uncertain forest of "social progress," we can expect about as much security as Little Red Riding Hood enjoyed when she went to visit Grandma!

One of the few constructive, forward steps taken by the medical profession in the last twenty years has been the adoption of Blue Shield. It may represent one of our few hopes for survival as a self-determining profession. In theory, its original aim was to convert a system of postponed payment for medical service into a streamlined system of prepayment for protective care. This was intended to confer a benefit on the public by allowing low-income groups to share the full advantage of private medicine—and at the same time, the profession would gain the benefit of converting a large amount of charity service into paying practice.

Both these theoretical benefits have been so realistically vindicated in the experience of the last two decades that they now stand above debate. But today a third, and still more important, benefit from Blue Shield is becoming more and more apparent, for this service has given us what we as a profession never possessed before. It has given us an intelligently

co-ordinated and professionally controlled corporate body through which we can bargain with the public and they with us.

If we continue to administer Blue Shield wisely, it may be all that we need to retain our professional independence. To administer it wisely, we must be willing to give as well as to receive—to regulate our practice and our fees so as to preserve our freedom from being regulated and to grant the public as many benefits as we hope to assure for ourselves. But if selfishly administered, Blue Shield is likely to collapse like the house built on sand, for when the rains of public disfavor fall, selfishness will not stand. It lacks the one principle that is essential to all modern institutions: public service.

The last of the three questions remains to be answered: How effective is Blue Shield likely to become in the future? The factor that determines success in any enterprise is management. A capable management will continue to increase the service of Blue Shield; of course, the reverse is also true, for bad management automatically will destroy itself. Perhaps these statements sound like platitudes, until we realize that they have laid the very floor on which we stand. We, as doctors and as members of the Medical Society, are the managers of Blue Shield. Its success depends on us. Its failures remain our responsibility.

Is there a moral? Very frankly, yes! We must stop focusing our thoughts childishly on income levels and fee schedules; we must top bickering and yammering. We must grasp the larger significance of the splendid organization that we have built up in the last twenty years. We must stand behind it in its major decisions—not for selfish gain, but to share with the public a mutual service and benefit. In this way, and in no other, can the medical profession preserve its time-honored status as an altruistic body of men, free from the sordid controls of politics or commerce, devoting itself wholeheartedly to scientific and humanitarian tasks.

Changing Patterns

EDITOR
New England Journal of Medicine

Dr. Bradford, in his letter on the present problems of Blue Shield, published elsewhere in this issue of the *Journal*, shows that he has given much thought to the problems of medicine in general, and believes in facing them realistically. It is trite to say that man is living in a changing world, for the world is always changing. At present it happens to be going through a series of major, critical alterations.

As changes come to this country medicine must not always be found fighting a delaying action, especially in view of its relations with the public, which are perhaps at one of their lowest points in recent history. Whatever course the nation takes in its social, political, and economic evolution, the medical profession, for its own salvation, must lead in the development of constructive plans for the delivery of medical service under the new order, whatever it may be.

As Dr. Bradford states, Blue Shield is the plan that has been developed and offered by the profession itself. Regardless of whether it was started for the benefit only of low-income groups and incidentally of the doctors who must provide them with their service, it has undergone a changing pattern like everything else beneath the firmament.

Blue Shield remains the doctor's own generally accepted agency through which he can deliver what a large percentage of the public seems to want—a plan for prepaid medical care—and through which he can keep an intelligent, constructive control over his hire and the conditions under which the care is provided. His success in maintaining the confidence of his public and in regaining it, where it has been lost, will depend on what he gives and not on what he gets. The practice of medicine is still, in its fundamental aspects, a service as dedicated as the ministry, and those who base their success on their income are not truly in that service.

Public Health . . . .

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Poliomyelitis and Aseptic Meningitis

The year 1955 showed a drop in the number of poliomyelitis cases reported in Virginia, 336 against 613 the previous year. This was the first year in which Salk vaccine was used and it was too early to note effect due to vaccine alone. In 1956, 237 cases were reported and in 1957, 107 cases. There appears to be an increasing reluctance on the part of physicians in Virginia, and this is also apparent elsewhere in the United States, to make the diagnosis of nonparalytic poliomyelitis. In 1954, 1955, 1956, and 1957 the paralytic cases were 396, 152, 151, and 69 respectively, while the nonparalytic cases were 217, 184, 86, and 69 respectively. During 1955 poliomyelitis was still prevalent. During 1956, however, it seemed as if some other virus was operative along with polio virus. In 1957 this was clearly indicated by outbreaks of infections, apparently of viral origin, reported from four areas of the State, which suggested nonparalytic poliomyelitis but did not completely satisfy this diagnosis.

Observations of this condition were not reported until many cases had developed in an area. Knowing that "aseptic meningitis" was prevalent in other parts of the country, this information was immediately transmitted to the Communicable Disease Center of the Public Health Service and an epidemiologist was sent to Virginia to investigate. Though he came at once, he found in the Peninsula region that the peak of the outbreak had passed and it was impossible to collect laboratory specimens during both acute and convalescent stages for comparative study.

It should be understood that the term "aseptic meningitis" is being used in its currently accepted sense. It does not apply to a specific disease entity but covers a syndrome that is common to many etiologies. The characteristic symptoms and signs of this syndrome are fever, headache, often vomiting, neck and back rigidity, changes in the cerebrospinal fluid showing counts of from 20 to 1,500 cells with a predominance of lymphocytes. Responsible agents may be either bacteria, e.g. tubercle bacilli and leptospirae, or a variety of viruses. Included in the latter are the viruses of measles, mumps, the Coxsackie and the ECHO groups. These last two concern us in differentiating nonparalytic poliomyelitis.

The World Health Organization Committee on Poliomyelitis, in Section 2. 3. 2. of its Second Report, Geneva, July 15-20, 1957, reviewed current problems in the nomenclature and reporting of poliomyelitis and polio-like diseases. The committee called attention to the value of reporting paralytic cases separately. A clinical definition of paralytic poliomyelitis which has been adopted for purposes of reporting is that the patient must have clearly demonstrable paralysis (as opposed to transient weakness). This paralysis, flaccid in type, should be recognized preferably by more than one physician on two consecutive physical examinations performed at least 24 hours apart. Examinations should be made during both the acute phase of illness and the convalescent period. Cases with cranial nerve involvement, including bulbar cases, are to be listed in the paralytic group.

The term "nonparalytic poliomyelitis" is a correct term when applied to the disease caused by virus of poliomyelitis. In the past this has proved too convenient a term and it has been suggested that it be eliminated. In its place another term is offered, such as: *aseptic meningitis syndrome, etiology unknown,* when the identification of an etiologic agent by laboratory tests has not been made; or the term *aseptic meningitis syndrome, due to polio virus* (type 1, 2, or 3), or *due to Coxsackie virus* (A or B), or *due to ECHO virus* (type to be identified by number). The same sort of etiologic qualification should be used in connection with cases of *acute encephalitis of viral origin.*

In accord with the recommendation of WHO, the Poliomyelitis Surveillance Unit of the Communicable Disease Center of the Public Health Service is requesting the cooperation of the states in reporting poliomyelitis this year. To comply with this request it will be necessary to have the full cooperation of the practicing physicians of the State and to ask them to report immediately and in detail to their local health directors all cases suspected of being poliomyelitis. The preliminary report should include the name and address, age, race, and sex of the patient, date of first symptoms, complete poliomyelitis

vaccination history, including site of injection and site of first paralysis if inoculated within 30 days prior to onset, the preliminary diagnosis and remarks concerning symptoms and signs, and a statement regarding specimens submitted to the laboratory for study. Throat washings and stool specimens are important for virus isolation; blood samples, collected during both acute and convalescent stages, should be submitted for neutralization titers and for complement-fixation titers. These preliminary reports should be made on all cases *as soon as possible.* Final reports should be made when information is available as to convalescent clinical status, final diagnosis, and laboratory studies. The clinical status should be recorded 60 days or longer after onset and should include a note as to complete recovery without residual paralysis or with residual paralysis. If the latter, whether minor involvement, significant disability, or severe disability (bed, wheelchair, extensive bracing). A note on muscle grading and date of same should be given if possible, and a statement as to whether the patient is receiving physical therapy. If fatality has occurred, the date and cause of death should be given. Under "Final Diagnosis" one of the following should be listed:

Paralytic Polio, With Residual Paralysis
Paralytic Polio, No Residual Paralysis
Nonparalytic Polio

Aseptic Meningitis Syndrome
Probable Etiology:
Coxsackie (Group ___ Type___)
ECHO (Type ___)
Other (Specify) _____
Unknown
Other (Specify) _____

The final diagnosis should be supported by laboratory confirmations and should be submitted within 90 days after onset or sooner. For cases revoked due to completely changed diagnosis, the Final Report should be submitted at the time the case is closed.

A virus laboratory has been established in the State Department of Health Laboratory in Richmond and the Communicable Disease Center of the Public Health Service has informed the Commissioner that antigens for diagnosing the various types of virus diseases will be sent to the State Laboratory. This enables the Virginia State Department of Health to offer physicians of the State a laboratory service to differentiate the various types of viruses causing poliomyelitis or producing the aseptic meningitis syndrome. It is hoped that physicians in Virginia will join in these studies and it is believed that they will find such investigations challenging, stimulating, interesting, and satisfying.

MONTHLY REPORT OF BUREAU OF COMMUNICABLE DISEASE CONTROL

	May 1958	May 1957	Jan.-May 1958	Jan.-May 1957
Brucellosis	3	4	7	10
Diphtheria	1	1	12	5
Hepatitis	24	39	125	229
Measles	6659	843	16498	3426
Meningococcal Infec.	9	3	43	33
Meningitis (Other)	10	14	83	75
Poliomyelitis	1	1	4	11
Rabies (In Animals)	19	37	177	151
Rocky Mt. Spotted Fever	0	1	1	2
Streptococcal Infec.	795	572	3972	3768
Tularemia	0	2	18	17
Typhoid Fever	2	3	10	17

ANNUAL MEETING

THE MEDICAL SOCIETY OF VIRGINIA

RICHMOND, OCTOBER 12-14, 1958

Mental Health . . . .

About Handicapped Children

T. J. LASSEN, M.D.

There are several reasons for selecting this topic for discussion. The primary one is that various types of handicapped children are frequently seen in a mental hygiene clinic. The problem as a whole is a part of our mental hygiene problems. Almost equally significant is that psychological aspects of handicapped children may be overlooked at times, while considerable work and propaganda are carried on for physical help to these children. Certain common observations may also make us wonder about this problem, since it is striking that some handicapped children appear well adjusted, while others with the same or less afflictions have major emotional problems. Everybody has occasionally observed a crippled child get along with other children on a playground, even a baseball field, being fully accepted in the group. While a sympathetic onlooker may notice the handicap with distress, the other children don't seem to pay much attention to it, but, treat the particular child like anybody else in the group. On the other hand, it is not uncommon to see crippled children who are withdrawn and passive or aggressive and unable to function in a group for any length of time. This makes us wonder again, "Why the difference?" Even more fascinating does it become when we meet adult patients in a psychiatric hospital and are able, for instance, to trace a paranoid psychosis back to a physical defect, or to observe a physical handicap as a factor in a homosexual development. In asking these questions, one might as well ask why we all differ in our personalities, and part of the answer will be contained there; but, it is not possible to omit the handicap itself as an important factor. Not very long ago, it was commonly thought that handicapped persons were just different by nature, and they were expected to behave accordingly, but, today this explanation is no longer generally accepted, and an individual, dynamic approach is preferred.

There seems to be no doubt that these reactions are to some extent related to culture, since historical reviews reveal the various attitudes taken in the past. The physical handicaps have, in the past, most frequently been looked upon as the result of sin and as punishment inflicted either upon the persons themselves or their ancestors, while occasionally it has also been seen as a sign of holiness or superhuman power. Most commonly the interpretation has been that of weakness or inferiority, but, it is noticeable that in certain cases a physical handicap has been described as adjunct to a person. In some biographies of great historical persons with handicaps, their special ability or talent at least, has partly been attributed to a physical handicap, while in others it is related that they emerged into greatness in spite of their handicap. Physical handicaps have been used in recent history in propaganda as late as during the last World War when we could see in moving pictures as well as read about our enemies with their physical defects displayed in caricature. Presently horror pictures with gruesome, distorted figures tour the movies to the apparent delight of teen-agers with blessings of some psychiatrists and good easy money for the company. The general attitude in our present culture, however, seems to be that of understanding, rehabilitation, and an invitation to all handicapped persons to fulfill their particular place in our society.

Handicaps may, of course, be physical, mental, or a combination of both, the latter being most frequently seen in our clinic. Children with cerebral palsy comprise the biggest group. In this connection the well know fact that it is much easier to accept a physical than a mental handicap will again be stressed. A fund raising drive for help to physical disabilities interfering with the motor system is more apt to be successful than for those relating to strictly sensory disabilities. People will more readily give money to help a paralyzed child than to a deaf-mute or blind one. Maybe one shouldn't even mention the strictly mentally handicapped children, although they probably outnumber those with physical handicaps. Who wants to give money to help idiots, imbeciles, morons, not to speak of bothersome delinquents and semicriminals. The common reaction is that these groups should be cared for by the state

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Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

even though this has not always been adequately done. While this summarizes the public's reactions to the different handicaps, it may be worthwhile to say a little more about special sensory disabilities. One doesn't hear much about the blind and deaf-mutes in the community. Does that mean that their special needs for training and education are taken care of? Both generally and for the purpose of this discussion, is it interesting and intriguing to observe blind people in particular and to notice how well adjusted they usually are. It may also be surprising how individually different they are in their personalities and productivity. This does not, of course, imply that their personality is directly related to their handicap. Without delving too far into the special handicaps, it seems important to emphasize the special problems facing children with certain chronic illnesses, particularly those which could be called "hidden handicaps". Diabetic children are the most important of this group, and a good example of handicaps which are not usually recognized and, at times, even vigorously denied by the patients themselves.

The individual reaction to a handicap varies with its character and the personality of the child. A common observation is that children do not want to be different, and a disability, whether it is a minor cosmetic or a major paralytic one may constitute this difference. The child may, however, not be fully cognizant of this; and, although teasing is said to be common among children, it is this author's impression that it is the parents' projection and accentuation of a difference that is most harmful. It is at least observed that a group accepts a child with a disfiguration if the child himself is unconcerned about it, and does not otherwise give a particular reason for teasing. A child may be quite capable of accepting a handicap realistically if he has sufficient mental capacities and is secure otherwise. His reaction as a whole is therefore just as much dependent on his personality as on his specific affliction. In children with limited intellectual function, as for instance, frequently seen in cerebral palsy children, the same acceptance and understanding of the handicap cannot be expected as in children with a normal intelligence, and their afflictions, as they not rarely are multiple, will therefore have a more direct bearing on their personality development. When strong emotional components are attached to the handicap, one may see deviant traits occur early in the growth of the personality. The outstanding mechanisms appear as withdrawal with self-pity and hypersensitivity or denial with projection of hostility and consequent aggression.

The parental reaction to a handicapped child is, of course, of greatest importance. Only little understanding and imagination is needed to grasp the tragedy of a crippled child to a family, and even with the best intentions and insight the family may react unfavorably to the handicapped child. It certainly is much easier to talk about these problems than to handle them inside one's own circle. Over protection with resulting dependency is probably the most common reaction, and it is certainly understandable if the mother of a handicapped child tends to follow this line. She may do this contrary to her better knowledge and against determined will to stimulate independence and the development of the child's potentials. Accompanying this attitude at times is seen an exaggeration of the defect. This view may be carried over to the child by repetitious overconcern and criticism, and make him feel inferior. Parents are also met who feel guilty and ashamed when a defective child is part of the family and such feelings may also easily be projected into the child, and you then find children who feel not only ashamed, but, also at times guilty about their handicaps. Less acceptable and more aggravating are parents who reject their disabled child for this reason or that reason. There are, of course, parents who reject healthy children under any circumstances, but there are also parents who are specifically unable to tolerate their crippled child. It may be on such a plain and realistic level as the economic one, as they may grow tired of the medical expenses, such a child may lead them into, or the rejection may have more subtle reasons related to intrapersonal or social conflicts.

Sibling reaction to handicaps is also important in the family group, although it isn't always taken into consideration. Cases have been observed where the healthy sibling feels left out and rivalry may occur. The parents may appear to be more concerned and care more for the crippled member of the family than the others. It is at times distressing to observe how some parents may carry their handicapped child from specialist to specialist with but little hope for successful treatment and spend a considerable amount of hard earned money, which could more profitably be put aside for the training of a healthy sibling. Since the handicap of a child often is a delicate subject in the family, it may be very difficult for a sibling to express an honest opinion to his parents about this, particularly since

the sibling may usually also want to help the handicapped child as much as possible.

The handicapped child is not specifically characterized just by being handicapped, and this shows up more clearly in a group reaction. Based on general observation, this author finds that healthy children are quite able to accept the unfortunate and handicapped ones and play naturally with them. As a matter of fact, they are much more able in this respect than many adults, who will show pity, undue concern, sympathy, or other reactions. If the handicapped child is secure in his relation to others, he will want to be as much like them as possible and forget the affliction to the utmost extent. If the handicapped child is able to accept general rules in group play and activities, he will be one of the group, and one will see surprisingly little difference between the healthy child and the crippled one.

Since it has been previously stated that there are not any special personality resulting from a handicap, what is it then that determines the personality in a handicapped child? If there should be a specific effect, one would most likely adhere to the famous theories of Adler about organ inferiority, inferiority complex, and consequent compensatory mechanisms. One surely cannot overlook a boy's paralyzed leg, a girl's disfigured face, an imbecile's stupidity, or a diabetic's insulin reactions. This author has come to the conclusion, however, that the determinants are basically the same for personality development in the handicapped as in the average person. These basic factors are primarily genetic, constitutional and environmental. In other words, it is felt that the handicap does not predetermine an inferiority feeling, but, that the handicap may become the focus for such a feeling through environmental reaction. Unless the handicap itself is of such a nature that specific limits are set, this author feels that emotional factors are more important in the development of the personality than the handicap itself. The basic capacity of the child is, of course, of most importance; but, of the factors which can be influenced, the family atmosphere is outstanding.

Handicapped children, of course, have special needs. With our modern technique in orthopedic and plastic surgery, physiotherapy and pharmacology, many things can be done for these children in order that they may reach their optimum, and this should be early recognized. However, equally important to specific therapy may be the family's ability to accept the situation with a handicapped child fully and realistically. This will, in turn, make the child able to accept and face his defect and progress in spite of it like a Demosthenes, rather than surrender to it. These children do need assistance, but assistance, guidance, and training do not mean overprotection and dependency. Parents should be observant particularly early, of undue self-consciousness, withdrawal, and denial mechanisms as well as overcompensation and exhibitionism. The greatest danger may be the development of self-pity along with isolation and lead through projection of anxiety toward a paranoid solution. In our present culture, a great deal of help is offered to handicapped children, particularly those with physical handicaps. It is important in these cases that counselling is also done with the family, and usually this will be taken care of by the family physician. At time, however, more specific treatment may be indicated, such as psychotherapy with the handicapped child and collateral treatment of the parents. Such treatment can be offered in a mental hygiene clinic.

This discussion has attempted to deal in general with certain psychological aspects of handicapped children. Since the word handicap has been used so frequently in the discussion, it may be worthwhile before closing to agree upon the meaning of the word. A bit of philological research may not be out of place and a consultation with a dictionary gives us an interesting definition. "Handicap" is, of course, known from the world of sports and the word was originally used in this respect, meaning "to equalize conditions in a race". More specifically the dictionary says, "to draw lots", or "han-in-cap", which directly gives the word. From the student of languages we thus learn that handicapped children should be given a chance. They should be given an equalized chance, a really sporting handicap in the race of life and then be expected to continue to compete according to the rules of our society.

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Current Currents

DR. GUNNAR GUNDERSEN is the 112th president of the American Medical Association. In taking office on June 24 in San Francisco, Dr. Gundersen called attention to the physician's obligations to the causes of world health peace. He pointed out that as American citizens "our first duty is to this country. But as members of the brotherhood of man, we also have a duty toward all men who yearn for freedom, dignity and peace." Dr. Gundersen went on to say that "medicine can play a vitally effective part in bringing reality to the dream of world peace. For medicine, despite the designs of politicians or dictators, is above the harsh conflicts of ideologies and power policies. . . ."

FILMED HIGHLIGHTS of the AMA annual meeting will be available after September 1 for showing at medical meetings. The film, entitled "San Francisco—1958" was prepared by the American Medical Association in cooperation with Merck, Sharp & Dohme. The 40-minute black and white presentation features abstracts from 5 daily television programs and may be secured either from the AMA Film Library or Merck, Sharp & Dohme, Philadelphia 1, Pennsylvania.

25 MILLION PERSONS in the United States were hurt seriously enough in the second half of last year to require medical attention or to limit activities for at least a day. The latest report of the National Health Survey blames home accidents for 40.3 per cent of the total; work accidents, 16.7 per cent; motor accidents, 9.8 per cent and others, including injuries from violence, 33.1 per cent. Of the total, 14.1 million were males; 14.9 million were urban residents; 7.1 million lived in rural non-farm areas and 3 million on farms. On an average, about 1,750,000 persons were limited every day because of injuries, and of these, 305,000 were in bed or in hospitals.

THE 1958 PUBLIC RELATIONS INSTITUTE, sponsored by the AMA, will be held at Chicago's Drake Hotel on August 27-28. The meeting will be of particular interest to state and county medical society executives, public relations chairmen and members of PR committees. Last year, Virginia was represented by representatives of three component societies. It is hoped that all component societies will plan to send delegates this year.

THE TEXAS MEDICAL ASSOCIATION House of Delegates, after long and spirited discussion, recently voted to withdraw from its contract with the Defense Department under the Medicare program. Texas is the first of the 46 participating state associations to withdraw from Medicare. Ohio and Rhode Island have never participated.

THE TOTAL COST of accidents in this country last year was in excess of 10 billion dollars.

AN ILLINOIS CONGRESSMAN recently polled his constituents on such things as financing medical care for all those under social security. Rep. Harold L. Collier (R., Ill.) reported that 73 per cent were opposed, 26 per cent were in favor and only 1 per cent had no opinion. On the question of whether or not mandatory social security should be expanded, the response was 47 per cent yes, 48 per cent no and 5 per cent no opinion.

Congressman Collier also asked his constituents whether they favored government scholarships for higher education or some method such as tax benefits for individuals and business. Twenty-six per cent favored federal scholarships, 68 per cent were for some tax mechanisms and 6 per cent had no opinion.

THE WINNER of the National Essay Contest sponsored by AAPS is D. Herschel Mills, Angleton, Texas, and the last paragraph of his prize winning essay on "The Advantages of the American Free Enterprise System" is one which all of us should read over and over again.

> "What is free enterprise? It is a steel mill in Pittsburgh, an oil well in Texas, an orange grove in Florida. It is a man wiping the sweat from his brow in the corn field of Iowa, a doctor preparing for surgery. It is a one-room schoolhouse in the mountains of Kentucky. It is a wadded section of the stock market reports from a morning newspaper and, yes, it is the grin on a little boy's face as he tries to sell lemonade, "Only a nickel, mister." That's free enterprise. That's why our forefathers died. And it's what we must live for."

HATS OFF this month to the Fairfax County Medical Society and the Northern Virginia Medical Council for sponsoring a most interesting one day conference for Medical Assistants. More than 130 Assistants registered for the conference which featured sessions on public relations, legal responsibilities, standard claim forms and other subjects of interest and importance.

A SPECIAL EDITION of the AMA Journal (June 7) was recently sent to AMA members over the country. The edition contains the Principles of Medical Ethics and Opinions and Reports of the Judicial Council.

Although the Principles are being reviewed section by section in the Virginia Medical Monthly, members will find the AMA publication a handy reference.

DO YOU KNOW that more than 5,000 medical periodicals are published in the world today. Over a third of them are published in the United States.

THERE IS ONE PHYSICIAN for every 670 persons in this country. Fourteen countries have one physician for every 1,000 persons and 22 countries have only one physician for every 20,000 or more inhabitants.

The Medical Society of Virginia . . . .

MINUTES OF THE SPECIAL SESSION OF THE HOUSE OF DELEGATES

The House of Delegates of The Medical Society of Virginia met in special session on Sunday, April 13, in the Ballroom of Richmond's Hotel Jefferson. The meeting was called to order at 1:00 p.m. by Dr. Harry C. Bates, Jr., President.

The President received a report from Dr. Ira L. Hancock, Chairman of the Credentials Committee, who reported a quorum present.

Dr. Bates then welcomed the Delegates to Richmond and briefly reviewed the events leading to this first special session in the history of the Society. After reading the resolution calling for a Committee on Principles and Policies, Dr. Bates introduced the Committee Chairman, Dr. Hundley, who presented a preliminary report. He made it clear that the report was not being offered for adoption, but would probably be presented to the House in its final form during the Annual Meeting in October.

Upon the completion of his report, Dr. Hundley assumed the duties of Speaker of the House. He introduced Dr. John T. Hazel, Chairman of the Committee on Federal Medical Services, who reported on the activities of his Committee during the past two years. Of particular interest to the Delegates was Dr. Hazel's report of a meeting in Atlanta on January 11-12 which was called to consider the administrative regulations of the Medicare Program. He then read the following recommendation, which was adopted during that Conference:

> The representatives of state medical associations meeting in Atlanta, Georgia, January 11-12, 1958, to consider Medicare object to the administrative regulations of the program.
>
> Specifically, they take exception to the imposition of a service-type program, because of their convictions that under P. L. 569 an indemnity type plan is permissable. Further they express their sincere belief that an imposed service-type program interferes in principle and in practice with the doctor-patient relationship and contributes to deterioration of good medical practice.
>
> They consider it imperative for these and other state associations jointly to petition the appropriate congressional committees and the Secretary of Defense to permit negotiation of an indemnity program at the time of renewal of Medicare contracts.
>
> They, therefore, agree to request their associations to petition the appropriate congressional committees and the Secretary of Defense in this regard, in a concerted action, at the earliest moment permitted by approval of the associations concerned.

There followed a discussion as to the difference between service and indemnity plans. It was generally agreed that one of the principal differences is that under indemnity programs the fee paid by the government would not necessarily constitute total payment.

Colonel Earl Lowry, Assistant Executive Director of the Medicare Program, was then introduced and traced the development and progress of Medicare from its origin to the present. He stated that Public Law 569 was designed to answer many problems—one of which was the difficulty in keeping skilled personnel in service. The House was advised that this objective had, for the most part, been realized. Colonel Lowry went on to point out that obstetrics had long been the number one problem as far as service dependents are concerned. It was further reported that 43 per cent of the dependents served under the Program are living at home and approximately 45 per cent of all dependents' medical care is provided by civilian sources. The cost of the Program seems to be leveling off at approximately 6½ million dollars per month.

The House was advised that most of the services are being provided on the east and west coasts, and the southeastern region carries one of the heaviest loads. Colonel Lowry reported 68.2 per cent of all medicare services are provided in hospitals. He pointed out the program had uncovered some very interesting facts, one of them being that 44 per cent of all anesthesia is administered by persons other than anesthesiologists. He reported a survey revealed that 90 per cent of the service dependents are satisfied with the way the Program is working. The Delegates were informed that most physicians seem inclined to charge maximum fees rather than their usual fees which in many instances are lower. Colonel Lowry stressed the fact that there exists no indication the program is being used to further the

cause of socialized medicine. It was his opinion that just the opposite is true.

The Speaker then introduced Dr. Stuart Ragland, Jr., who urged the House to think carefully before committing the Society on the Medicare question. It was Dr. Ragland's belief that Medicare constitutes one more step along the road which can only lead to out and out socialism. He pointed out that already the Forand Bill has come along as the next big step. Dr. Ragland went on to mention that at the present time nearly one of every four persons in this country is eligible for some type of medical care at government expense. While recognizing the fact that certain inducements must be offered to retain skilled personnel in the armed forces, Dr. Ragland stated this is primarily a service problem and is not necessarily a responsibility of the medical profession. He deplored what he called the defeatist attitude of those who take the viewpoint that Medicare is law and the profession has no alternative but to participate.

Dr. Ragland mentioned the Ohio approach and expressed the belief that a state medical society does not have the right to negotiate a contract for every individual physician in the state.

The following resolution was then introduced by Dr. Mallory Andrews, representing the Norfolk Delegation:

> Resolved, that The Medical Society of Virginia negotiate for the continuation of Medicare and,
>
> Be It Further Resolved, that the State negotiators attempt to secure an agreement based on insurance or indemnity principles.

There followed considerable discussion as to whether or not Medicare represented the only answer to the military problem. Increasing governmental control was cited as the big issue.

A question was raised concerning the legality of P. L. 569 and Mr. Duval was requested to state whether or not, in his opinion, the Bill is constitutional. Mr. Duval replied that although there was no reason why the Bill could not be tested in the courts, he personally believed that it is constitutional.

Dr. Ragland then introduced the following substitute motion:

> Resolved, that The Medical Society of Virginia refuse to renew its contract with the Department of Defense under the Medicare Act unless it be set up as an indemnity program suitable to the ethical standards of The Medical Society of Virginia.

Dr. Salley questioned whether or not a motion is in order that conflicts with a resolution that has been introduced but not finally disposed of. The Speaker agreed and ruled the substitute motion as being out of order.

After further discussion, during which it was mentioned the medical profession has failed to offer a workable alternative to Medicare, it was moved and seconded that the debate be closed. The motion was carried.

The House then voted on the resolution introduced by Dr. Andrews and voted its adoption by 52-33.

The Speaker requested Dr. Archer to say a few words concerning the Forand Bill. All members of the House were urged to learn as much as possible concerning this legislation in order that they might assist in the all out battle to defeat it.

There being no further business, the meeting was adjourned.

Robert I. Howard
Executive Secretary

APPROVED:
Harry C. Bates, Jr., M.D.
President

CONFERENCE OF LEGAL COUNCIL AND EXECUTIVE SECRETARIES

THE SECOND conference of legal counsel and executive secretaries of state and local medical societies was held in Chicago on May 9 and 10, 1958, under the auspices of the American Medical Association. Many executive secretaries were present, and the lawyers in attendance included counsel for fifty or sixty state and local societies, the officers and legal staff of A.M.A., and counsel for a number of specialty groups.

The first day was given over to a discussion of the "Legal Aspects of Medical Practice Through 'Third Party' Mechanisms", and the subject was presented by a moderator and a panel of six attorneys under assigned topics as follows:

Hospitals and the Practice of Medicine.
"Closed Panel" Types of Practice.
Medical Schools and the Practice of Medicine.
Medical Care Program of United Mine Workers Welfare Fund.
Legal Aspects of Membership in County Medical Societies.

The entire morning was used in a general discussion of the several subjects by the panel workers,

with the afternoon hours given over to an informal and intensely interesting question and answer period in which was developed the various aspects of the problems as they are being worked out at the national and state level. Practice by hospitals came in for much discussion, during which it appeared that this problem has become less acute, due in part to the decision in the Iowa case, and to the growing recognition of certain specialty services as an integral part of the practice of medicine. Mr. Margett, counsel for the Medical Society County of Queens, stated that his group is much concerned over the activities of closed panel groups of physicians the members of which are furnishing medical care to civil service employees of New York City, and to other large industrial and commercial associations and organizations. One particular group has 30,000 dues-paying members, and no physician's fee will be paid except to members of the panel. In Georgia, practice by teachers in medical schools is a controversial subject which is about to be settled by an agreement between the Medical College of Georgia and the State and County Medical Associations. The use of fees is one of the troublesome questions. Much time was given to the various problems connected with the medical administration of the United Mine Workers Welfare Fund, but no happy solution seemed possible at this time. Several speakers felt that economic and social developments make it necessary for organized medicine to relax some of its time honored concepts of the physician-patient relationship, and adjust to conditions which it may not be able to change. The philosophy of free choice of physicians clashes with the duty of fund trustees to protect the interests of beneficiaries. All were of the opinion that this problem should be resolved if possible at the conference table and not in the courts, and that in the solution the welfare of the individual patient must be the first consideration. It seemed to be the consensus of opinion that local and state societies may still select their members, but that expulsion for other than adequate cause should be resorted to only after most careful consideration.

On the last day of the conference the morning hour was taken up with matters relating to Medical Professional Liability, and many interesting problems were considered. A novel one was the possibility that in a malpractice suit against a surgeon the records and reports of the Hospital Tissue Committee might be required to be produced in pre-trial discovery procedure in the Federal and in certain state courts. The view was expressed that although the records might not be admissible in evidence at the trial, the members of the Committee might be subjected to very embarrassing cross-examination with respect to their contents.

The case of *Salgo* v. *Leland Stanford University Hospital* and certain members of its medical staff has caused a lot of comment and some forebodings in medical circles. Mr. Howard Hassard, counsel for the California Medical Association and moderator of the panel on Medical Professional Liability, was counsel for the defendants in the Salgo suit, and made a most interesting presentation of the law and the facts involved. Salgo's trouble had been tentatively diagnosed as a probable occlusion of the abdominal aorta, and an aortography was directed. This was done in the late afternoon by an anesthesiologist, a radiologist and a surgeon, and the procedure appeared to progress normally and was completed with the patient in apparent good condition. However, the next morning the patient's lower extremities were found completely paralyzed, a condition from which he never recovered. In the resulting suit the trial court instructed the jury that as a matter of law the paralysis suffered by the patient under the state of facts established by the evidence created an inference of negligence on the part of the hospital and the attending physician which was sufficient to go to the jury in the absence of affirmative evidence of specific negligence. The rule of law on which the instruction was based is known in legal circles as the "res ipsa loquitur doctrine", and comes into play when the happening itself is one which in the ordinary course of events does not occur without negligence. The jury promptly brought in a verdict against all defendants for $250,000.00 and the trial court entered judgment. An appeal to the District Court of Appeal followed in due course, and the appellate court reversed on the ground that the instruction was erroneous. The plaintiff then appealed the District Court's decision to the California Supreme Court which affirmed the action of the District Court and remanded the case to the trial court for a new trial. A few weeks ago the plaintiff Salgo died, and as under the California law an action of this type does not survive to his administrator, the litigation is doubtless ended. However, it still leaves open and uncharted the ever changing line of demarcation between those medical acts which in themselves create an inference of actionable negligence, and those in which negligence must be established by positive evidence.

The afternoon session on Friday was devoted to

Libel, Slander and Privacy in Medicine, Legislation and Lobbying Practices of State Medical Societies, and Tax Advantages of Corporations and Unincorporated Associations. We were told that in certain states physicians may form a corporation to practice medicine if the ownership and management of the corporation is in licensed practitioners. The Supreme Court of Appeals of Virginia has held that a corporation cannot practice law, and if the question should arise in our State it would doubtless hold that the same rule applies to the practice of medicine.

We have a tentative promise from A.M.A. that a full transcript of the proceedings will be prepared and made available to interested persons who have the time to read it. If so, it will be another example of the splendid service given its members by the American Medical Association.

Perhaps it is not out of place to add that to take a trip by air to Chicago, under the tutelage of the Executive Secretary who was a splendid pilot for six years before entering upon his present work, is a rare and enjoyable experience.

Robert C. Duval, Jr., Attorney.

Decreases in Work and Obesity

Using a standard typewriter instead of an electric typewriter could be the difference between staying thin and gaining weight. So could the use of a standard steering wheel instead of power steering, walking instead of driving, playing golf instead of gardening, just standing up instead of sitting down, and many other "seemingly insignificant differences" in daily habits.

The difference lies in the amount of energy needed for each activity, according to an article in the May 10th Journal of the American Medical Association.

The basic cause of obesity is an intake of calories in excess of the needs of the body. Small increases in the amount of food eaten and small decreases in the work output of the body—as when a person switches to an electric typewriter—can over a period of time be responsible for overweight. Dr. Herbert Pollack, New York, and C. Frank Consolazio, A. B., and Gerhard J. Isaac, A. B., Denver, prepared the article for the A.M.A. Council on Foods and Nutrition.

Each person has a "basal caloric requirement" —the number of calories needed to just stay alive— based on his age and the surface area of his body as measured in square meters. In addition, the calorie expenditure (or cost) per square meter of body surface for any activity can be figured. It's a rather complicated procedure, but it has been determined, for instance, that there is a difference of almost nine calories an hour for each square meter of body surface between sitting quietly and standing quietly. The differences in the calorie expenditure per square meter of body surface between lying down, sitting, standing quietly, and standing while moving in a limited area "do not appear large, but when multiplied by the total minutes during the day, they loom large."

If an individual fails to reduce his caloric intake as he ages and decreases his activity, he will gain weight. For instance, this could happen to a typist who switches typewriters—over a long period of time, of course. A girl who is five feet, three inches tall and weighs 120 pounds used 87.7 calories per hour typing on a standard typewriter, but only 72.9 calories with an electric typewriter. For a five-day week the saving amounts to 450 calories; in 10 weeks this can be the equivalent of a pound of body weight provided her food intake is constant, the authors said.

"The importance of the calorie expenditure factor in the development of moderate obesity in the adult should not be minimized."

Miscellaneous . . .

Principles of Medical Ethics

This is the fifth of the series of "Principles of Medical Ethics", the first appearing in the February issue. Each section will be reviewed, accompanied by a detailed explanation from the Judicial Council of the American Medical Association.

SECTION 6

A physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgment and skill or tend to cause a deterioration of the quality of medical care.

TRADITIONAL CONCEPTS INCLUDED WITHIN SECTION 6

The Judicial Council is of the opinion that Section 6 of the Principles of Medical Ethics, 1957, embraces the spirit and intent of several sections of the 1955 edition of the Principles, including Chapter VII, Section 2 (Conditions of Medical Practice); Chapter VII, Section 3 (Contract Practice); Chapter VII, Section 4 (Free Choice of Physician); Chapter VII, Section 5 (Purveyal of Medical Service). These sections are reproduced below as guides in the interpretation of Section 6.

Chapter VII, Section 2 (Conditions of Medical Practice) 1955 edition of the Principles of Medical Ethics:

> A physician should not dispose of his services under conditions that make it impossible to render adequate service to his patients, except under circumstances in which the patients concerned might be deprived of immediately necessary care.

Chapter VII, Section 3 (Contract Practice) 1955 edition of the Principles of Medical Ethics:

> Contract practice as applied to medicine means the practice of medicine under an agreement between a physician or a group of physicians, as principals or agents, and a corporation, organization, political subdivision or individual, whereby partial or full medical services are provided for a group or class of individuals on the basis of a fee schedule, or for a salary or for a fixed rate per capita.
>
> Contract practice *per se* is not unethical. Contract practice is unethical if its permits of features or conditions that are declared unethical in these Principles of Medical Ethics or if the contract or any of its provisions causes deterioration of the quality of the medical services rendered.

Chapter VII, Section 4 (Free Choice of Physician) 1955 edition of the Principles of Medical Ethics:

> Free choice of physician is defined as that degree of freedom in choosing a physician which can be exercised under usual conditions of employment between patients and physicians. The interjection of a third party who has a valid interest, or who intervenes between the physician and the patient does not per se cause a contract to be unethical. A third party has a valid interest when, by law or volition, the third party assumes legal responsibility and provides for the cost of medical care and indemnity for occupational disability.

Chapter VII, Section 5 (Purveyal of Medical Service) 1955 edition of the Principles of Medical Ethics:

> A physician should not dispose of his professional attainments or services to any hospital, lay body, organization, group or individual, by whatever name called, or however organized, under terms or conditions which permit exploitation of the services of the physician for the financial profit of the agency concerned. Such a procedure is beneath the dignity of professional practice and is harmful alike to the profession of medicine and the welfare of the people.

ANNOTATIONS to SECTION 6 OPINIONS AND REPORTS OF THE JUDICIAL COUNCIL

The following are excerpts from Reports and Opinions of the Judicial Council which are applicable in interpreting Section 6.

Practice of Medicine by Corporations

It was decided long ago that the practice of law by a corporation was against public policy and the same has been prohibited by law in many states. The relations between patient and physician are more

intimate than are those between client and attorney. It is impossible for that intimacy of relationship to exist between an individual and a corporation and if it is against public policy for a corporation to practice law, how much more so must it be for a corporation to practice medicine. (*1922 Report*)

Hospital and Health Associations

In previous reports, the Council has referred to organizations controlled by groups of laymen, or by individuals, offering medical and hospital service to any who will buy "membership" and pay a nominal sum each month as "dues". The Judicial Council has regarded these schemes as being economically unsound, unethical and inimical to the public interest.

The members of the Judicial Council doubt that it is wise to lead the people in any community to believe that all necessary medical and hospital service, even though chronic diseases and obstetric care be excepted, can be provided for the average family for $35 a year. (*1929 Report*)

Practice of Medicine by Corporations

With regard to the practice of medicine by corporations, it is the opinion of the Judicial Council, that such practice is detrimental to the best interests of scientific medicine and of the people themselves. When medical service is made impersonal, when the humanities of medicine are removed, when the coldness and automaticity of the machine are substituted for the humane interest inherent in individual service and the professional and scientific independence of the individual physician, the greatest incentive to scientific improvement will be destroyed and the public will be poorly served. (*1930 Report*)

Availability of Medical Services

Many forces are pressing for the adoption of new methods of medical practice and for changes in the relations of physicians, as individuals and as organized groups, toward the public and toward institutions and organizations, and also for revolutionary changes in the very traditions of the profession with respect to the obligations and privileges of physicians in their contacts with one another. These forces have in some instances been sadly misdirected and will result in disaster to medicine and to the public.

The complexities of modern society may make it imperative that some changes shall be made, but the duty of the organized profession is to see to it that any and all proposals for change, from whatever source, shall be scrupulously and deliberately examined with the view of determining their ultimate value. Decisions should not be made on the basis of feasibility for the immediate present but should be made in the light of the experience of the profession, the nature of its service, the imperative need for maintaining professionalism and the absolute necessity for unhampered scientific advancement, and with utmost regard for the best interest of the people. (*1932 Report*)

Ability of Patient to Pay

One of the strongest holds of the profession on public approbation and support has been the age-old professional ideal of medical service to all, whether able to pay or not. That ideal is basic in our ethics. The abandonment of that ideal and the adoption of a principle of service only when paid for would be the greatest step toward socialized medicine which the medical profession could take. All our arguments as to better service to the people, freedom of choice of doctors would be as naught if such service were not available to a vast proportion of the people. (*1934 Report*)

Contract Practice

All medical practice is contract practice either implied or expressed between the physician and the patient if the patient be of legal age, or between the physician and the parent or guardian of a minor. There is no reason in law or morals why a physician should not enter into a contract with an individual, firm or corporation, provided that the contract be an honorable one for the performance of any honorable act and not interfering with the right of others. Lodge practice and the industrial insurance work stand out as being distinctly on a different basis from the other contracts with economic corporations. The contracts made between physicians and economic corporations are necessities in our present stage of economic development. Surgeons and physicians are employed by these corporations partly as a matter of self protection—to properly care for the accidents occurring in the transaction of their business and that they may be well protected against unjust damage suits that are likely to occur. Besides this self defense of the company there is a growing appreciation by large corporations that the better the health of their employees is protected the better will be the results obtained in their work, and hence while it may tend toward benevolent and socialistic ideas, it is really a question of economic efficiency. Further many lumber and mining camps are widely

distant from towns and places where physicians would naturally settle and these camps need some medical men to care for the men employed. All such contracts as these are necessities and should be recognized as such, the only question arising being the details of the contracts and the fairness of the remuneration given. If medical men are poorly paid and paid below the possibility of a fair living wage, they give poor service in return and there is a law of diminishing return even in the matter of medical services.

The Judicial Council believes that the remedy for the evils associated with contract practice resides in the county societies, and that these societies should use their influence and power not to condemn the physician who must take the contract by ostracizing him but to prevent underbidding for these contracts below what would give a fair reward for medical services rendered. So, too, in the matter of lodge practice, the Judicial Council believes it to be the duty of the local county societies to endeavor to reform and not alone to condemn the abuses of lodge practice. Because lodge practice is the expression of health insurance it must sooner or later be faced. . . . Properly controlled, the lodge practice should bring an adequate service to its members and an equitable remuneration to the medical man. The details, however, are to be left to each locality and county society. (*1913 Report*)

Contract Practice

(a) Because of so many inquiries received, the following definition, arrived at after very thorough consideration, is presented.

> "By the term 'contract practice', as applied to medicine, is meant the carrying out of an agreement between a physician or group of physicians as principals or agents and a corporation, organization or individual, to furnish partial or full medical service to a group or class of individuals for a definite sum or for a fixed rate per capita." (*1926 Report*)

(b) It will be observed that in the definition of contract practice submitted to the House in 1926 no mention is made of the ethics of the practice for the reason that contract practice per se is not an ethical question, ethics, being concerned with the form of the contract and the conditions under which it is made. That there are many conditions under which contract practice is not legitimate and ethical, but in fact the only way in which competent medical service can be provided, becomes evident on analysis. For instance, where large numbers of workmen are employed remote from urban centers, as in some mining or logging camps, in such instances efficient medical service can be secured only by contracting with some competent physician to do the work. Certain industrial situations arise wherein large employers of labor are compelled by law to provide medical services for their employees under certain conditions, and this at times can be secured only by some form of contract. A community too small to offer sufficient inducements to a competent physician to locate therein may secure one by some form of contract or agreement as to compensation. It is perfectly evident, therefore, if we are to judge whether a contract is ethical or not, that we must know the form and terms of the contract as well as the particular circumstances under which it is made. As there is such a great variety of contracts, as their form and the circumstances under which they are made differ so widely, it seems impossible, or at least inadvisable, to attempt to define what constitutes an ethical contract. Each case must be judged on its own merits after all the facts pertaining thereto are known. There are certain points, however, that may be formulated which, when present, definitely determine a contract to be unfair or unethical. These may be stated as follows:

1. When the compensation received is inadequate based on the usual fees paid for the same kind of service and class of people in the same community.
2. When the compensation is so low as to make it impossible for competent service to be rendered.
3. When there is underbidding by physicians in order to secure the contract.
4. When a reasonable degree of free choice of physicians is denied those cared for in a community where other competent physicians are readily available.
5. When there is solicitation of patients directly or indirectly.

In the interpretation of the rules of ethics as applied to the practice of medicine: (1) By the word "practice" is meant the performance or application of medical knowledge; (2) by "solicitation" is meant to seek professional patronage by oral, written or printed communications either directly or by an agent; (3) by "patient" is meant any person ill or otherwise. (*1927 Report*)

Practice Under Compensation Laws

Communications have raised certain questions as

to conditions of medical practice under existing compensation laws. These questions concern those provisions of such laws which appear to encourage the practice of medicine by corporations, to curtail the privileges of the individual employee with respect to the free choice of his medical attendant, to interfere with the rights and privileges of physicians not connected with corporations, and also to touch on matters of ethics.

The American Medical Association cannot control legislation or the administration of law. The compensation acts of the various states differ widely in their provisions effecting the questions mentioned. Some of them are manifestly inequitable as they affect the practice of medicine and the best interests of employees and the public. The remedy must be sought at the hands of legislatures in the several states, and it would seem to be the responsibility of the constituent state association to instigate measures seeking relief. The individual state medical association, as it holds original jurisdiction in such matters, must consider these questions, deal with them in the light of the law, and seek to effect needed corrections. (*1929 Report*)

Periodic Health Examinations and Vending Medical Services

The medical profession is confronted today with one of the most important and serious problem that it has been called on to meet. Briefly, and in business parlance, the question is: Shall the medical profession vend its products directly to the consumer or shall it sell them to a middleman or third party? This question comes to the attention of the Judicial Council by reason of the extensive propaganda that is being waged at the present time in regard to periodic health examinations. The American Medical Association has gone on record through the House of Delegates favoring periodic examinations, and this Council concurs in the desirability of such examinations being made. A number of commercial organizations have entered the field and, as middlemen, or jobbers, are offering to furnish periodic medical examinations to the public generally for a stated sum per annum and to send reports of the findings to the examined; and some of these organizations are giving advice to the examined as to what they should do for the conditions found. These examinations can be made only by physicians; hence, these companies are signing up contracts with physicians to make examinations and to forward the reports directly to the company. The company then pays the physician a definite price and then sells the results of the examination to the individual examined at a much higher price. In other words, these companies acting as jobbers buy the physician's services at one price and sell them to the public at another.

When a physician signs a contract with a commercial organization to make physical examinations of all persons sent to him by the organization for a price set by the organization, and allows that organization to make its own charge to the individuals examined for the services rendered by the physician, the physician is selling his independence to the jobber.

One institution claims that the work which it is doing is of great value to the physician, at least to those physicians who have signed contracts to market their products through the company. It is stated: "It must be conceded that we are giving a powerful impulse to the development of the general practitioner, not only in the matter of encouraging the people to consult him but in stimulating him to broaden his diagnostic work and adjust himself to this ever-increasing public demand for preclinical service." There are several things stated in this sentence which deserve attention. It is stated that "it must be conceded that we (the institution) are giving a powerful impulse to the development of the general practitioner". Is it conceded by the profession that it was necessary for a commercial institution to enter the field of medicine to buy and sell the product of the physician's brains in order to stimulate the development of the physician? Is it conceded that making examinations for a commercial organization for $5 each, which the company immediately sells to the examined for four times that amount, is a powerful impulse to the development of the physician's ability? Does it stimulate the diagnostic work of the physician to have that work bought by a jobber at one price and immediately resold to the consumer at much higher price? Is there such a revolution taking place in the practice of medicine by its commercialization by stock companies, organized for profit, that it is necessary for the physician to readjust himself to the new order of things? If these things are true, it is certainly time for the profession to rouse itself from its slumber of inertia before it is shorn of its strength by the Delilah of commercialism. This is not a case of the good of the public versus the good of the profession. If it were, there would be no question at issue, for the profession always has and always will yield its

own interest to that of the public good; but it is a case in which the public good can be best served only by what is best for the profession.

Individualism in the practice of medicine is essential to success if one has in mind the interest of the patient and the encouragement of medical progress. The relation between the patient and the physician is an individual matter, and anything that disturbs this relationship is detrimental to the best interests of the patient. We cannot help but feel that the service of periodic health examinations, as conducted by commercial institutions, must inevitably result in the undermining of the confidence of the people in the ability of the practitioner.

While it is true that periodical health examinations are often of value and are to be recommended in a general way, we are inclined to regard the indiscriminate communication of the results of such examinations to the examined in the form of the statements that are commonly made by these organizations as unwise and often injurious to the individual who applies for examination. No organization is medically qualified or, in our opinion, justified in issuing to individuals applying for examination a routine statement of the results of the examination.

We believe that enough has been said to show the importance of the subject, and feel that it is incumbent on this body to devise ways and means of setting the public aright on the question of periodic health examinations, and to convince the people that the proper person to make such examinations and to give advice relative thereto is the family physician, aided, when necessary, by local specialists. (*1924 Report*)

Periodic Health Examinations by Lay Organizations

The Judicial Council desires to express again its firm conviction that the benefits of scientific medicine cannot be adequately delivered to the individual through the medium of a third party, and that the communication of results of physical examination and the general advice with which it should be associated should go directly from the individual physician to his patients. The relation between the patient and the physician is an individual matter, and anything that disturbs this relationship is detrimental to the best interests of the patient. (*1925 Report*)

Health Associations

Communications have been received concerning the ethics involved in the organization and operation of so-called health associations or hospital associations which, through paid solicitors or otherwise, solicit members. These "members" are, of course, prospective patients. The general plan being used by these groups embraces the payment of nominal membership dues, for which medical and surgical services, are promised when needed. The Judicial Council is of the opinion that in some instances promises are made that cannot be carried out because it is utterly impossible for adequate medical service, to say nothing of surgical and hospital service, to be delivered for the sum realized through the collection of nominal membership dues. It goes without saying that for any organization of any kind to offer for an agreed stipend more than the reasonable worth of that which is offered is wrong in principle and physicians should guard themselves against being connected with such organizations.

It has also come to the attention of the Judicial Council that lay groups have in some instances organized or have sought to organize their members into so-called health associations. Their purpose, as frankly stated, is to secure a reduction in the cost of medical, surgical and hospital service to their members. So far as such organizations may be actuated by motives designed to reduce the cost of medical service to themselves below a sum at which adequate service can be rendered by competent physicians, they are, of course, based on misconception and will bring about results disastrous to their own members. The Judicial Council, does not believe that the reputable medical profession as such can be justly accused of imposition and extortion. The cost of medical service has undoubtedly increased, but it is believed that this increase has not been by any means proportionately as great as the increased cost of living commodities, or of labor, or of services rendered by the members of other professions. The individual physician who drags pure commercialism into the practice of medicine or who extorts undue fees from his patients brings reproach on the whole profession and should receive the censure that is due him; likewise, he who furnishes medical service to groups at rates below a fair value of the services rendered. The honest and competent physician who is interested in maintaining honored traditions and who is in the practice of medicine as a profession should receive such compensation for his services as will enable him to maintain himself and his family in comfort and to make provision against the time when he cannot keep up professional activities. (*1926 and 1931 Reports*)

Hospital Privilege Tax

It has been brought to the attention of the Judicial Council that some hospitals have adopted rules whereby attending staff physicians are prohibited, under certain conditions, from accepting fees for professional services, though charges for such services are made and fees are collected and appropriated to their own use by these hospitals. In one instance, members of a hospital staff were prohibited from the collection of fees for services rendered to certain ward patients, who were required to pay for hospital accommodations and to pay for service rendered by members of its staff, the hospital retaining all money collected for its own use. The Judicial Council gave its opinion to the effect that such procedure on the part of a hospital is unethical. (*1929 Report*)

Purveyal of Medical Service to Direct Profit of Lay Group

The privilege of healing the sick as a profession is a right granted only to those properly qualified and licensed by the state. It is a privilege belonging only to the medical profession. It is a sacrifice of professional dignity that this exclusive right of medicine is so often sold for individual gain or its possessor deprived of it against his will. In increasing numbers, physicians are disposing of their professional attainments to lay organizations under terms which permit a direct profit from the fees or salaries paid for their services to accrue to the lay bodies employing them. Such a procedure is absolutely destructive of that personal responsibility and relationship which is essential to the best interests of the patient.

Outstanding examples of this type of unearned gain are not difficult to find. There are insurance companies administering workmen's compensation benefits wherein the salaries or fees paid to the physician by the insurance company are so much below the legal fees on which the premium paid by the industry is based as to furnish a large direct profit to the insurance company. Certain hospitals are forbidding their staffs of physicians to charge fees for their professional services to "house cases" but are themselves collecting such fees and absorbing them in hospital income. Some universities, by employing full time hospital staffs and opening their doors to the general public, charging such fees for the professional care of the patients as to net the university no small profit, are in direct and unethical competition with the profession at large and their own graduates. They are making a direct profit by a practice of questionable legality, from the professional care. (*1932 Report*)

Hospital Insurance Should Not Include the Sale of Medical Services

Whether the scheme (group hospitalization insurance) is or is not financially or economically sound is not the problem of our organization, but is our business to see that the furnishing of medical service is not included in the sale of insured hospital accommodations. This can be done if a strong stand is taken and maintained by the organized medical profession, which must keep a watchful eye to see that medical care is not initially or later included when the usual sales efforts demand increased benefits to purchasers. Various hospitals are invading the field of the practice of medicine, sometimes at and sometimes against the desire of the members of our profession involved in such instances. It would seem that in this time of extensive changes in hospital economics the point has arrived at which further marriages between hospitals and staff physicians that make the doctor of medicine the servant of the hospital should be stopped and a series of attempts at divorce among marriages that have already taken place should be instituted. (*1936 Report*)

Anesthesia a Medical Service

We emphasize our insistence that anesthesia is a medical service and therefore should always be under the direction and supervision of a physician who assumes the responsibility and who should present his bill for services. No hospital or individual without a license to practice medicine should be permitted to collect the fee for anesthesia. (*1948 Report*)

Financial Arrangements and Ethical Conduct

The Council has repeatedly stated that the acceptance of a salary by a physician does not of itself constitute unethical conduct.

If in a given situation, a physician disposes of his professional services under terms which permit exploitation, his conduct is unethical. Knowledge of the facts, however, may reveal that there is no exploitation; that there is not an unethical division of fees; that there is not a denial of free choice of physician as defined by the Principles or that the arrangement does not cause a deterioration of the quality of medical services.

Solutions of controversies relating to financial

arrangements can best be effected at the local level. (*1953 Report*)

Free Choice of Physician

(a) The Judicial Council calls attention to the third point of the Ten Principles adopted in Cleveland in 1934 which defines "free choice of physician". This the Council interprets to mean not only the patient's right to choose any physician desired but also, conversely, the physician's right to accept or reject any patient requesting his services under the plan. It also expressly requires that any qualified, licensed physician residing in the area in which the plan operates be allowed to participate. Thus we see that to be a participating doctor in a voluntary plan it is not necessary for one to be a member of the American Medical Association. It is, however, necessary for him to accept and obey the terms of the contract offered by the plan, and on violation of the terms he may be dropped from the rolls, if the violation seems sufficiently grave for such action. It is needless for us to remind members that any violation of this provision would indeed deprive the public of the choice of a great many physicians. As the voluntary plans are intended to cover and supply sufficient medical care of a high quality for the whole country, with no feature of a compulsory system, it is necessary that the principle be strictly observed. However, it is tacitly understood that any contact between an approved voluntary medical plan and a doctor includes an understanding that the ethics of the American Medical Association will not be violated. These basic points also require that the medical profession determine the adequacy and character of the hospitals. All hospitals approved by the local physicians and willing to accept the terms of the plan should be allowed to participate. In order that a high standard of medical service be maintained, hospitals may limit somewhat the number of physicians who deliver medical service in their institutions and even assign a physician to certain definite fields in accordance with his training and experience. The widest possible use of hospitals approved by the local professional should be encouraged in order not to limit the number of doctors made available for the plan. Under no circumstances shall doctors working under this plan be forced to send patients to a particular hospital unless it is the only one approved in that area. (*1947 Report*)

(b) The phrase "free choice" of physician is more and more frequently used and there is a general understanding of what the phrase means. Actually no person can have an absolutely free choice for many reasons, and if his freedom of choice is not absolute then it is not free but limited. Chapter II, Section 3 of the Principles [1955 edition] states: "A physician is free to choose whom he will serve." Therefore the physician whom the patient chooses may decline to serve when he is chosen, or the chosen physician may be unavailable for many reasons. (*1937 Report*)

Traffic Safety

In 1957, 1330 Americans were killed in train-car crashes.

53,000 Americans were injured in car-bicycle mishaps in 1957.

A total of 38,700 Americans were killed in 1957 traffic accidents.

In 1957, 2,525,000 Americans were injured in traffic accidents.

Speeding was blamed for 13,200 deaths on U.S. highways in 1957.

In 1957, 7,500 pedestrians were killed by autos in the U.S.

Jaywalking was costly in the U.S. last year—2,600 were killed.

More than 95 per cent of vehicles involved in fatal accidents on U.S. highways in 1957 were in apparently good condition.

Bad driving conditions prevailed in less than 15 per cent of the fatal highway accidents in the U.S. in 1957.

More than 21 per cent of 1957 U.S. highway deaths occurred on Saturdays.

Week-ends are the most dangerous time to be on U.S. highways. In 1957, more than 55 per cent of all fatalities occurred on Fridays, Saturdays and Sundays.

During 1957, there were 1,300 fewer highway traffic fatalities than in the previous year.

Nearly 27 per cent of U.S. drivers involved in 1957 traffic fatalities were under 25 years of age.

Passenger cars were involved in over 78 per cent of all U.S. traffic fatalities in 1957 and in 86 per cent of traffic injuries.

In 1957, there were over 370 persons killed while crossing at an intersection with signal. Remember, cross cautiously.

Woman's Auxiliary . . .

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Treasurer—Mrs. Wyndham B. Blanton, Jr., Richmond
Publication Chairman—Mrs. Paul Pearson, Warsaw

Home Preparedness Workshop.

The Home Preparedness Workshop presented by the Woman's Auxiliary to The Medical Society of Virginia in Norfolk on April 29th and 30th was well attended by representatives from many of the auxiliaries through the State. It was very enthusiastically received.



Virginia's Survival Plan. Mr. F. J. Nicholson, Mrs. W. Clayton Lytle, Mrs. J. R. St. George, and Mrs. H. Frederick Stephens. Mr. Nicholson is discussing the Civil Defense Map.

Mrs. Frank A. DeLaura, Civil Defense Chairman for the State Auxiliary is to be commended for her tireless efforts, which have proven what dedicated women doctors' wives in Virginia are to community leadership and the welfare of our people. Not only are the delegates who attended the Workshop determined to take the information back to their local auxiliaries, but they are also willing to cooperate with their local Civil Defense Coordinators or City Managers, in informing the hometown folks how important it is to begin at home.

One of the first admonitions Mrs. Lytle, the Regional FCDA Director of Women's Activities, passed on to the women was the fact that "All families will be expected to live for two weeks on the stockpile which should be in every home". "Grandma's Pantry" has become a necessity again. In Grandma's Day, Mother was prepared for any emergency. Today, modern housewives depend on the neighborhood grocery and other modern conveniences. In case of foreign attack or natural disaster, the grocery might be closed by order of the government to prevent looting, because of radiation, or because food trucks might not be able to get through to provide the necessary supplies. If we do nothing more than convince the housewives of Virginia of the importance of "Being Prepared", we will have served our communities well and saved much suffering and inconvenience.

Mrs. Lytle was a most inspiring director. She met with the planning committee in March, flying to Norfolk from Wilmington, Delaware. Under her guidance the committee, composed of Mr. F. J. Nicholson, local deputy Civil Defense Coordinator, Miss Blair Stewart, Chief, Civil Defense Nursing Services, Mrs. Eloise C. Bull, Director of Nursing Service, Norfolk Chapter, American Red Cross, Mr. Paul D. Jackson, Director, Safety Services & Disaster, Norfolk Chapter, American Red Cross, Dr. Meyer I. Krischer, Chairman, Disaster Coordinating Committee, Norfolk County Medical Society, Dr. G. B. Tayloe, City Health Department, Captain W. T. Thorn and Chief W. R. McCullin, Norfolk City Fire Department, Mrs. J. R. St. George, President, Woman's Auxiliary to The Medical Society of Virginia, Mrs. William O. Winston, Chairman Civil Defense, Woman's Auxiliary to the Portsmouth Academy of Medicine, Mrs. Robert Thrasher, Chairman Civil Defense, Woman's Auxiliary to the Norfolk County Medical Society, Mrs. Byron T. Eberly, President-elect Woman's Auxiliary to the Portsmouth Academy of Medicine, and Director for the skits, and Mrs. Frank A. DeLaura, Chairman Civil Defense, prepared a tentative program, which was sent to the 22 auxiliaries in the State. The State president and president-elect visited a great number of

these auxiliaries between the time of the planning meeting and the actual workshop and explained the agenda in detail. Genuine interest was evident on each occasion.

The doctors' wives are aware that they will have the responsibility of the home and family in time of disaster. It is necessary that they know something of home nursing, first-aid, firefighting and sanitation. Virginia is a vital area in our country's defense and the physicians of Virginia have their work cut out and their posts assigned. I am sure they can go to those assignments, if the need ever arises, with a sense of satisfaction, knowing that their wives have prepared themselves and the family in advance.

Mrs. H. Frederick Stephens, of Barrington, Rhode Island, Eastern Regional Chairman Civil Defense, Woman's Auxiliary to the American Medical Association, was present for the two-day workshop. It was at her suggestion that Mrs. DeLaura presented the project to the Virginia Auxiliary. Mrs. Stephens and Mrs. Lytle both felt that "Home Preparedness" was the course most needed. Certificates were awarded to those who attended the two full days.

This project was financed for the most part by the Civil Defense and the City of Norfolk. The Civil Defense Rescue Truck was exhibited and Mass Feeding was demonstrated by the Emergency Welfare Service. A Field Kitchen was set up showing how five hundred people could be served, stressing sanitation. Each person being served took his own utensils from a rack, dipped them in a vat of boiling water, was taught how to hold the utensils, passed down an assembly line, where food had been prepared without being touched by hands. After eating sandwiches, holding them in the paper in which they were wrapped so our own hands would not contaminate our food, we disposed of our own garbage in prepared receptacles and washed our own dishes with a stiff brush in boiling water and detergents in the first two vats and rinse in the third. Latrines were set up at proper distance from food handling. Water was purified in canvas bags hanging from tripods. The participants in the workshop received a new experience and much information about mass feeding, realizing that "It can happen here".

The two days were packed so full of learning and doing that the Woman's Auxiliary feels duly proud of this excellent workshop and expect to present the report as its project at the A.M.A. Convention in San Francisco in June.

The workshop included: A film "To Live Tomorrow"—What to Do When the Signals Sound by Mrs. Wilfreda J. Lytle, Director, Women's Activities, FCDA, Region 2, Olney, Md.; Virginia's Survival Plan—Film "The Day Called X" by John R. Matthews, Jr., Project Manager, Virginia Operational Survival Plan; Home Care of the Sick and Injured by Mrs. Eloise C. Bull, Director of Nursing Service, Norfolk Chapter, American Red Cross; Emergency Action to Save Lives—Practice First Aid by Mr. Paul D. Jackson, Director, Safety Services and Disaster, Norfolk Chapter, American Red Cross; Defense Against Radiation—Demonstration of Geiger Counter by Dr. Meyer I. Krischer, Chairman, Disaster Coordinating Committee, Norfolk County Medical Society; Demonstration of the Use of the Manikin for Disaster Training by Miss Blair Lee Stewart, Chief, Civil Defense Nursing Services, Norfolk Civil Defense; Home Fire Prevention by Captain W. T. Thorn, Norfolk Fire Prevention Bureau; Firefighting for Householders by Deputy



Demonstration of the Use of the Manikin for Disaster Training.

Chief K. W. Sykes, Norfolk Fire Division; Rescue Demonstration by Deputy Chief C. R. King, Norfolk Fire Division; Safe Food and Water Demonstration, water purification; exhibit of pantry supplies, first aid kits, etc., by Mrs. Lytle and Mrs. DeLaura; and Emergency Sanitation by G. D. Monola, Superintendent, Division of Sanitation, City of Norfolk, Department of Public Health.

Louise W. St. George (Mrs. J. R.)
President

Editorial....

The Gastric Ulcer Problem

THE PROPER MANAGEMENT of the gastric ulcer has been extensively discussed in panels, dissertations, and "bull sessions" at medical meetings for many years. Most physicians have fixed ideas on the subject which they change with difficulty.

On one side are a group of physicians, mostly surgeons, who feel that the minute a gastric ulcer has been diagnosed, surgery is indicated. The rationale behind this thinking is that no matter how many diagnostic procedures are performed, absolute accuracy in diagnosis cannot be obtained other than by careful microscopic study. We know that both benign ulcers and gastric carcinomas occur in both sexes, in all ages, and in all locations in the stomach. The size of the ulcer is of little help, as both large and small benign ulcers, and large and small malignant ulcers occur. Radiologists are unable to determiine with complete accuracy which lesions are benign and which are malignant, although they do have various criteria which suggest benignancy or malignancy. Gastroscopic examination is of great help in many cases, but there are blind areas in the stomach, and even if good visualization of the lesion is obtained, accuracy of the diagnosis leaves much to be desired. Papanicolaou smears with either gastric washings or balloon abrasive techniques are quite helpful in certain cases, but a negative report does not rule out malignancy. In my own experience, I have made inaccurate diagnoses in many cases with the lesion in my hand at operation. So have competent pathologists when the specimen is examined grossly. The plea for prompt removal of all gastric ulcers is based on the feeling that the percentage cure of gastric carcinoma cannot be increased by more radical surgery but only by earlier diagnosis. With earlier surgery, five-year survivals without evidence of recurrence have risen from under 5% to around 15% to 20%—an appreciable saving.

On the other side are those physicians, mostly internists, who feel that a delay of several months for diagnosis and treatment is fraught with little danger and that a great many unnecessary operations can thereby be prevented. If every diagnostic procedure available is used in these cases, the percentage of accuracy of diagnosis can be definitely increased. Not only should thorough radiological studies be made by a capable radiologist, but gastroscopic studies, Papanicolaou smears, gastric analyses and clinical observation under treatment should all be performed. Surgery, they state, should be resorted to only in those cases in which a diagnosis of carcinoma can definitely be made. All others can be treated medically, these physicians say. They feel that an operative mortality rate of 2% or 3% will be saved in the great majority of cases. In addition, the morbidity in all these patients will be lessened, and the end result from a nutritional standpoint will be improved.

The following criteria should at present be considered indications for surgery: 1. any gastric ulcer which the radiologist or gastroscopist suspects is malignant; 2. gastric ulcers in the presence of achlorhydria; 3. positive or equivocal findings on Papanicolaou smears; 4. any gastric ulcer that does not show signs of healing at the end of two weeks' treatment and does not show complete healing at the end of four weeks' treatment; 5. persistence of evidence of gastrointestinal bleeding with a known gastric ulcer; 6. recurrent gastric ulcers.

It is important for all of us to remember that gastric carcinoma frequently improves on ulcer therapy. Studies should be continued for at least six months after every gastric ulcer has completely healed. If there is reappearance of the ulcer, immediate gastric surgery is indicated.

HUGH H. TROUT, JR., M.D.

Society Proceedings . . . .

Virginia Academy of General Practice.

Dr. W. Linwood Ball, Richmond, was installed as president of the Academy at its annual meeting at Virginia Beach, May 8-11. Dr. Fletcher J. Wright, Jr., Petersburg, was named president-elect. Drs. R. G. McAllister and William A. Young, both of Richmond, were re-elected secretary and treasurer, respectively. Drs. Cecil B. Dixon, South Boston; Frank D. Daniel, Charlottesville, and Richard C. Reed, Norfolk, were named directors.

Dr. Malcolm Harris, West Point, is the retiring president. Dr. Harry M. Frieden, Norfolk, was general chairman for the meeting and Dr. James L. Hamner, Mannboro, program chairman.

Virginia Society of Opthalmology and Otolaryngology.

At the meeting of this Society, held in Richmond, May 2-3, the following officers were elected: President, Dr. Calvin T. Burton, Roanoke; president-elect, Dr. Maynard P. Smith, Richmond; vice-president, Dr. William C. Anderson, Winchester; and secretary-treasurer, Dr. Marion K. Humphries, Charlottesville. Members of the Executive Council are Drs. Howard L. Mitchell, Lexington; L. Benjamin Shepperd, Richmond; Emanuel U. Wallerstein, Richmond; James W. Phillips, Newport News; Porter B. Echols, Lynchburg; Mason Smith, Richmond; and Peter N. Pastore, Richmond.

The next annual meeting will be held in Charlottesville in May of 1959.

The Virginia Society of Internal Medicine.

Seventy-six members of the Virginia Section of the American College of Physicians, meeting in Richmond March 1st, voted to organize a state society of internists. The Virginia Society of Internal Medicine was accordingly formed, composed of internists who are members of the American College of Physicians, and the original roster contained the names of the seventy-six specialists. This Society was accepted into the federation of the American Society of Internal Medicine at its meeting in Atlantic City on April 27th.

An active member, according to the By-Laws, will be a fellow or associate of the American College of Physicians, a holder of certificate of the American Board of Internal Medicine or equivalent examining board, or in exceptional circumstances a physician who is recognized in his community and in this State by his training, experience, and ethical qualities to be a specialist in Internal Medicine.

Officers of the newly formed Society are: President, Dr. M. M. Pinckney, Richmond; vice-president, Dr. J. Franklin Waddill, Norfolk; and secretary-treasurer, Dr. Thomas N. Hunnicutt, Newport News. In addition to the officers, the Executive Committee is composed of Drs. George L. Craddock, Lynchburg; Reverdy Jones, Roanoke; and James L. Moss, Alexandria.

Richmond Academy of Medicine.

At the meeting of the Academy on May 13th, Dr. W. Alexander Law, The London Hospital, London, England, was guest speaker. His subject was Spinal Osteotomy. Dr. Law is one of England's noted young orthopedic surgeons and he trained in Boston under Dr. M. N. Smith Peterson.

News Notes . . . .

New Members.

The following new members have been admitted into The Medical Society of Virginia since the list published in the June issue of the Monthly:

Harry Shore Abram, M.D., Charlottesville
William Glenn Allen, Jr., M.D., Richmond
Nuzhet O. Atuk, M.D., Charlottesville
David Simpson Borland, M.D., Richmond
Thomas Phillip Caine, Jr., M.D., Warwick
Ben Lake Critzer, M.D., Portsmouth
Sandidge Evans, M.D., Hampton
Louis Henry Keffer, Jr., M.D., Warwick
William L. Kraus, M.D., Denbigh
William Watkins Martin, Jr., M.D., Richmond
Jason Eugene McClellan, M.D., Newport News
Patrick O'Connell, M.D., Winchester

James William Phillips, M.D., Newport News
August John Podboy, M.D., Lynchburg
Herman David Stevens, M.D., Newport News
Ian Pretyman Stevenson, M.D., Charlottesville
Arthur Lorwin Thiele, M.D., Charlottesville
Pendleton Emmett Thomas, III, M.D., Richmond
Marion Crockett Waddell, M.D., Richmond
Gerald Albert Williams, M.D., Charlottesville
William H. Young, Jr., M.D., Alexandria
John Elmer Zearfoss, Jr., M.D., Alexandria

Dr. Sutton Resigns.

Dr. Lee E. Sutton, Jr., has resigned as chairman of the department of pediatrics of the Medical College of Virginia. He will remain with the department as a professor.

Dr. Carolyn Moore McCue has been named interim chairman until a permanent chairman is appointed. She had been promoted from assistant to associate professor.

Dr. Walter B. Martin,

Norfolk, has been made a master in the American College of Physicians. There are less than thirty physicians holding masterships and to be selected is a very great honor.

Mr. Loranz Again Honored.

Mr. C. P. Loranz, Professional Relations Counselor of the Southern Medical Association, has been awarded the Honorary Degree of Doctor of Science from Erskine College in Due West, South Carolina.

Dr. John D. Hamner, Jr.,

Has been promoted to regional director of local services of the State Health Department. He has recently served as director of the Caroline-Hanover-King William health district. Dr. Hamner will give advisory services to health directors and health department personnel in the northern section of the State. He will have the responsibility for the following local health district: Albemarle-Charlottesville, Alleghany-Bath-Highland-Covington; Amherst-Nelson, Arlington, Augusta-Staunton-Waynesboro, Botetourt-Rockbridge-Loudoun-Winchester, Culpeper-Greene-Madison-Orange, Fairfax-Falls Church, Fauquier-Prince William, Fluvanna-Goochland-Louisa, Henrico, Page-Rappahannock-Shenandoah-Warren, and Rockingham-Harrisonburg.

Dr. Stanley P. Mayers, Jr.,

Has been named to the newly created position of Regional Director of the Division of Local Health Services of the State Department of Health. He will be responsible for health services in Fredericksburg and the counties of Stafford, Spotsylvania, Caroline, Hanover, King George, King William, King and Queen, Mathews, Gloucester, Essex, Middlesex, Richmond, Westmoreland, Lancaster and Northumberland. Dr. Mayers will coordinate all types of in-service training for professional personnel within the entire State Health Department.

Dr. Mayers has served in Arlington County public health and as director of the Patrick-Henry-Martinsville health district. For the past year, he has been attending the school of public health of Johns Hopkins University. He will make his headquarters in Richmond.

Other Changes in the State Health Department.

Dr. R. H. Butler has assumed the duties of Director of the Amherst-Nelson Health District.

Dr. William A. Cobain has assumed the duties of Director of the Patrick-Henry-Martinsville Health District.

Effective July 1st, Dr. R. W. Moseley was transferred from the Carroll-Grayson-Galax Health District to the Caroline-Hanover-King William District. Until a replacement is made, Dr. James M. Suter will serve as Acting Director.

Dr. Esther G. Fagan has completed the M.P.H. degree at Columbia and has returned to her previous district of Alleghany-Bath-Highland-Covington.

Dr. L. O. Fears, Jr., has completed the M.P.H. degree at Hopkins and has returned to his former district of Page-Rappahannock-Shenandoah-Warren.

Dr. F. J. Spencer has completed the M.P.H. degree at Harvard and has returned to the King George-Spotsylvania-Stafford-Fredericksburg District.

Dr. Derek Robinson is Director rather than Acting Director of the Buchanan-Tazewell Health District.

Dr. Apperly to Retire.

Dr. Frank Longstaff Apperly, head of the department of pathology of the Medical College of Virginia, will retire July 1st after 27 classes of medical students. He came to the College when most of it was a lot "covered with billy goats, broken bottles, tin cans and weeds." In their place he has left a museum and an indelible imprint on the minds of hundreds of medical students.

Dr. Apperly plans to spend his retirement in travel,

particularly in France where he will study French history.

Dr. J. Asa Shield,

Richmond, was recently elected executive vice president of the Virginia Museum of Fine Arts.

Dr. Pendleton Honored.

Louisa County recently said "Happy Birthday" to Dr. E. Barbour Pendleton, the county's oldest practicing physician who is beginning his second half century of medical practice. He celebrated his seventy-third birthday on June 1st and 600 people gathered to do him honor. Dr. Pendleton was presented with a gold vase and next fall there will be a roadside planting of shrubs, trees and flowers, with a marker in his honor, near Cuckoo where the doctor practices.

Dr. Benjamin W. Rawles, Jr.,

Has been elected a vice-president of the Richmond Area Association for Retarded Children.

Dr. Joseph E. Barrett,

Superintendent of Eastern State Hospital, Williamsburg, was recently presented with an honorary, gold membership pin by the Virginia Association for Mental Health. This is the first such pin presented by the State group and the citation noted Dr. Barrett's "long years of continuing sympathetic interest and unselfish service".

Dr. Wyndham B. Blanton, Jr.,

Richmond, has been appointed assistant dean of the School of Medicine of the Medical College of Virginia. In the new part-time post, he will head an intensive study of the curriculum of the school.

Watts Hospital Symposium.

The sixteenth annual Watts Hospital Symposium will be held on February 11 and 12, 1959, in Durham, North Carolina.

Dr. George S. Grier, III,

Newport News, has been elected president of the Virginia Heart Association. He is a past president of the Peninsula Heart Association.

American College of Obstetricians and Gynecologists.

Dr. Waverly R. Payne, Newport News, has been named as Virginia Chairman of the College, with Dr. Eugene S. Groseclose, Lynchburg, vice-chairman.

Lynchburg General Hospital Day.

More than 100 doctors of Lynchburg and neighboring counties were guest of the administration and medical staff of the Lynchburg General Hospital for the first annual "Lynchburg General Hospital Day" on May 14th. Dr. David H. Hume, Medical College of Virginia, was guest speaker for the evening session, his subject being Treatment of Upper Gastrointestinal Hemorrhage.

Investigatorship Awards.

The Arthritis and Rheumatism Foundation offers predoctoral, postdoctoral and senior investigatorship awards in the fundamental sciences related to arthritis for work beginning July 1, 1959. Deadline for applications is October 31, 1958.

These awards are intended as fellowships to advance the training of young men and women of promise for an investigative or teaching career. They are not in the nature of a grant-in-aid in support of a research project.

For further information and application forms, address the Medical Director, Arthritis and Rheumatism Foundation, 10 Columbus Circle, New York 19, N. Y.

Location Wanted.

Dermatologist, Virginia license, available 1959, seeks opportunity to locate in Virginia. Write #450, care the Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

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Obituaries . . . .

Dr. Charles Singleton Dodd,

Prominent eye, ear, nose and throat specialist, Petersburg, died May 13th. He was a native of Halifax County and seventy-six years of age. Dr. Dodd graduated from the Medical College of Virginia in 1904 and studied at Johns Hopkins University and at Allgamine Kronken Houss in Vienna, Austria. He was a founder and member of the board of directors of the Virginia Negro Baptist Children's Home in Chesterfield County. Dr. Dodd was a Life Member of The Medical Society of Virginia, having joined in 1905.

His wife, two daughters and a son survive him. His brothers are Drs. W. T. and R. A. Dodd, both of Chase City; Dr. W. R. Dodd, Richmond, and Dr. S. H. Dodd, Boykins.

At a special meeting of the Petersburg Medical Faculty, which was held on June 10, 1958, to express tribute to the memory of their late colleague, Dr. Charles S. Dodd, the following resolutions were read and unanimously adopted:

WHEREAS, God in His infinite wisdom has removed from our midst a true friend and loyal colleague, who faithfully served his community and state,

BE IT RESOLVED, that in the death of Dr. Dodd, the profession has lost a valued associate and the community a useful and esteemed citizen, who has been a member of the Petersburg Medical Faculty for over fifty years and was outstanding in the practice of his specialty of otolaryngology and ophthalmology.

He was an active and loyal member of the Fourth District Medical Society and The Medical Society of Virginia, as well as the American Medical Association.

He was one of the organizers and charter member of the Virginia Society of Ophthalmology and Oto-Laryngology, of which he later was president.

Dr. Dodd exemplified the characteristics of an outstanding Christian physician and his death will be a great loss to his professional associates, his loyal and devoted patients, and his many personal friends.

BE IT FURTHER RESOLVED, that these resolutions be spread on the minutes of the Faculty and that copies be sent to the family and to the Virginia Medical Monthly for publication.

WILLIAM B. MCILWAINE, III, M.D., *Chairman*
HERBERT C. JONES, M.D.
MEADE EDMUNDS, M.D.

Commander Edward Victor Valz,

MC., U.S.N., retired, Philadelphia, died May 9th at the age of seventy-nine. He was a graduate of the School of Medicine, University of Virginia, in 1903 and entered the Navy in 1907. Dr. Valz was a veteran of the Mexican and First Nicaraguan campaigns and of World Wars I and II. He had been a member of The Medical Society of Virginia for fifty-two years and was made a Life Member in 1953. Two sons and a daughter survive him.

Dr. Herbert William Swertfeger,

Virginia Beach, died March 11th of coronary disease. He was fifty-six years of age and received his medical degree from the University of Virginia in 1933. Dr. Swertfeger was associated with the De Paul and Norfolk General Hospitals in Norfolk. He had been a member of The Medical Society of Virginia since 1949.

Dr. George Edward Mowry,

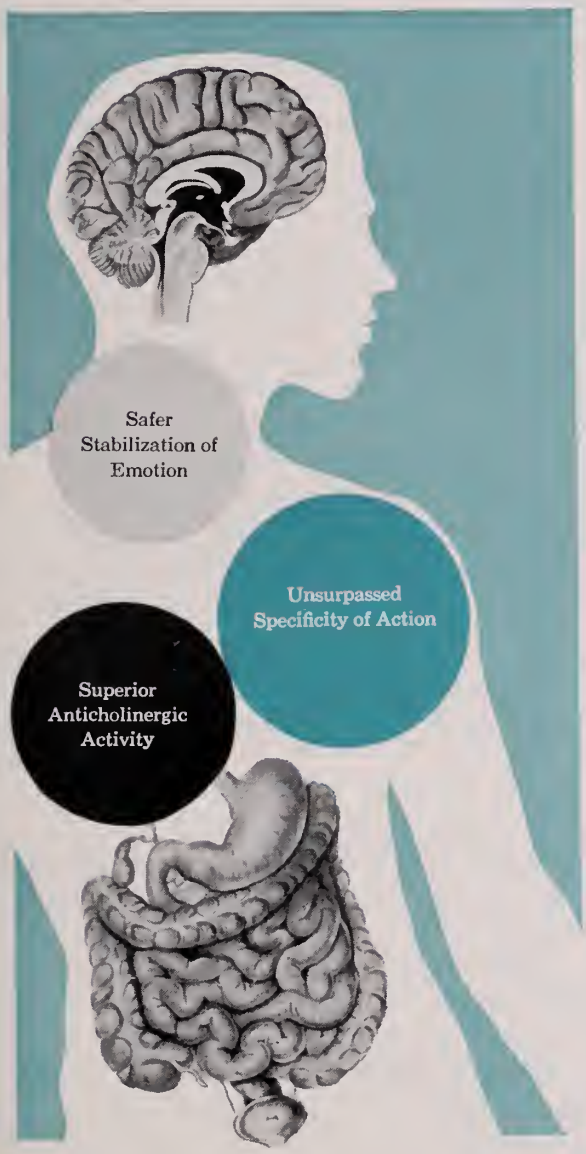
Wicomico, died June 3rd. He was thirty-five years of age and a graduate of Temple University, School of Medicine in 1952. Dr. Mowry began his practice in Wicomico in 1953. He was a member of The Medical Society of Virginia. His wife, two daughters and a son survive him.

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The State Board of Medical Examiners of Virginia

The next meeting of the Virginia Board of Medical Examiners will be held in the Richmond Hotel, Richmond, Virginia, June 11, 1958. The examinations will be held in the same hotel June 12th to 14th, inclusive. All applications and other documents pertaining to the examinations or to matters to be discussed by the Board must be on file in the Secretary's office on or before May 20, 1958. The Secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.

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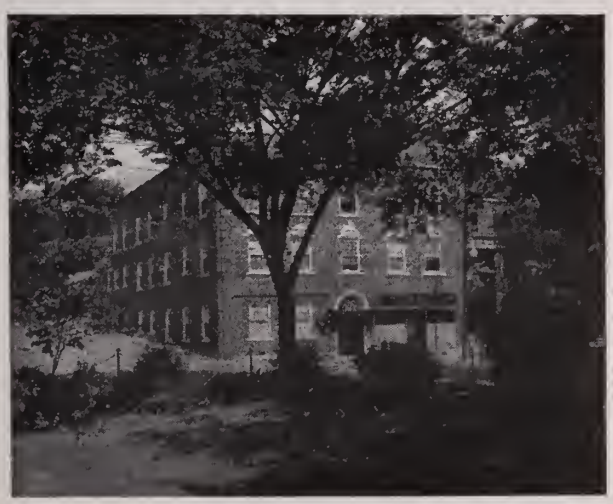
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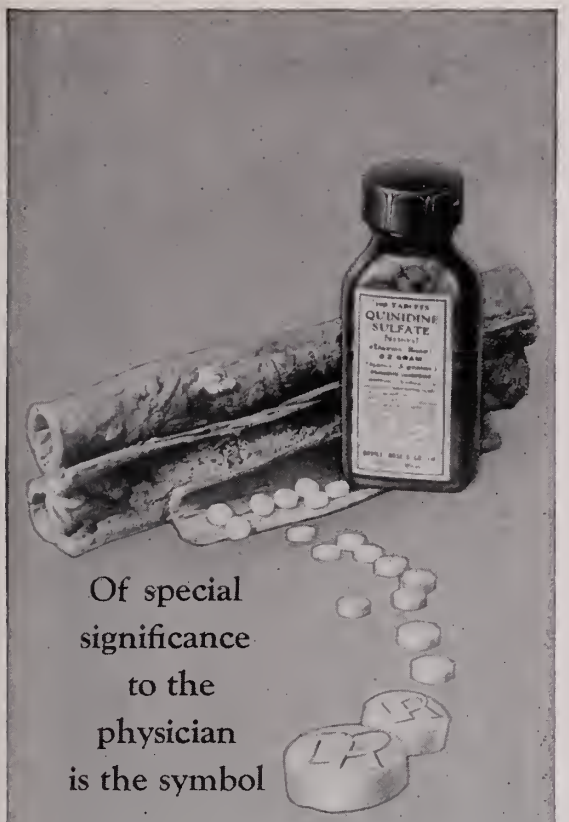
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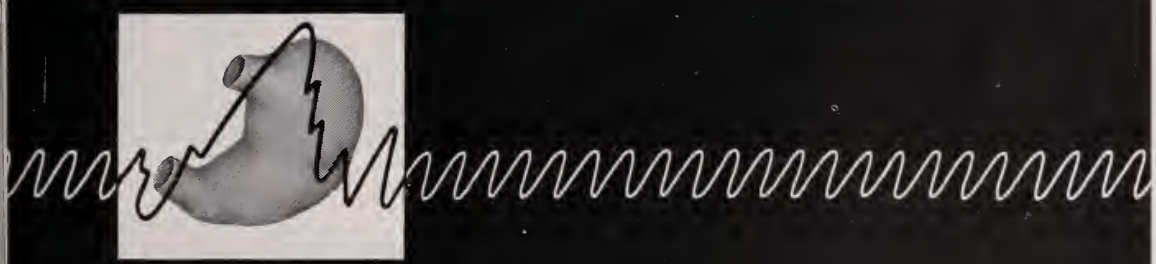
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Reference: 1. J.A.M.A. 158:386 (June 4) 1955.

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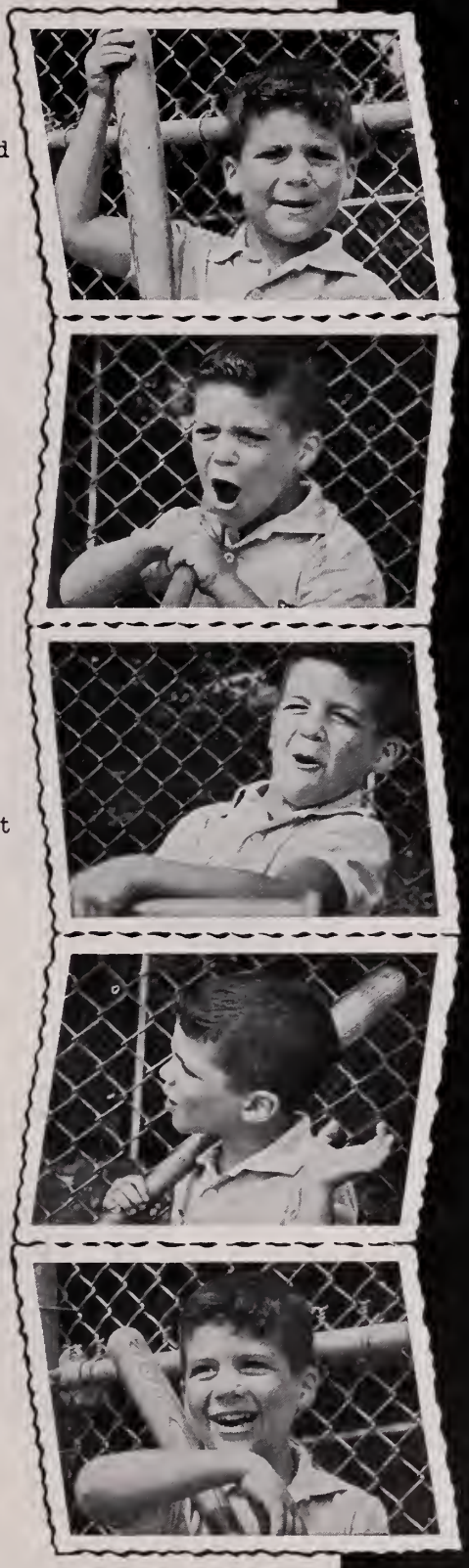
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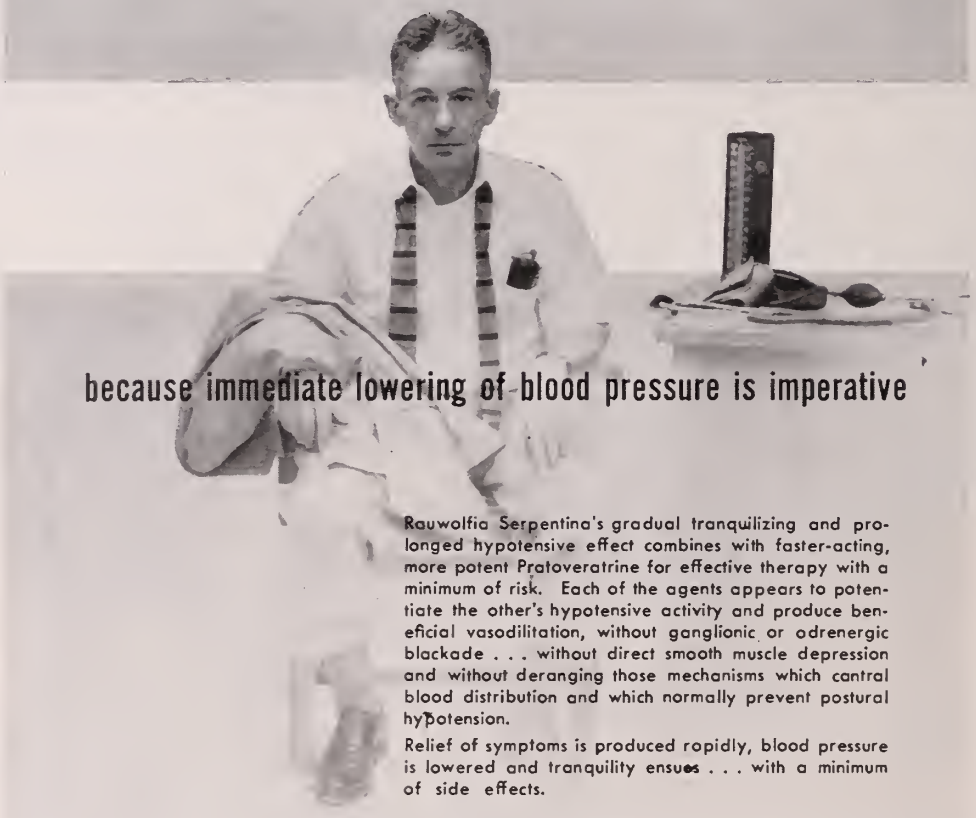
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Riseman, J. E. F., Altman, G. E., and Koretsky, S.: Nitroglycerin and Other Nitrites in the Treatment of Angina Pectoris, Circulation (Jan.) 1958.

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FORD, R. V., Rochelle, J.B.III, Handley, C. A., Moyer, J. H. and Spurr, C. L.: J.A.M.A. **166**:129, Jan. 11, 1958.

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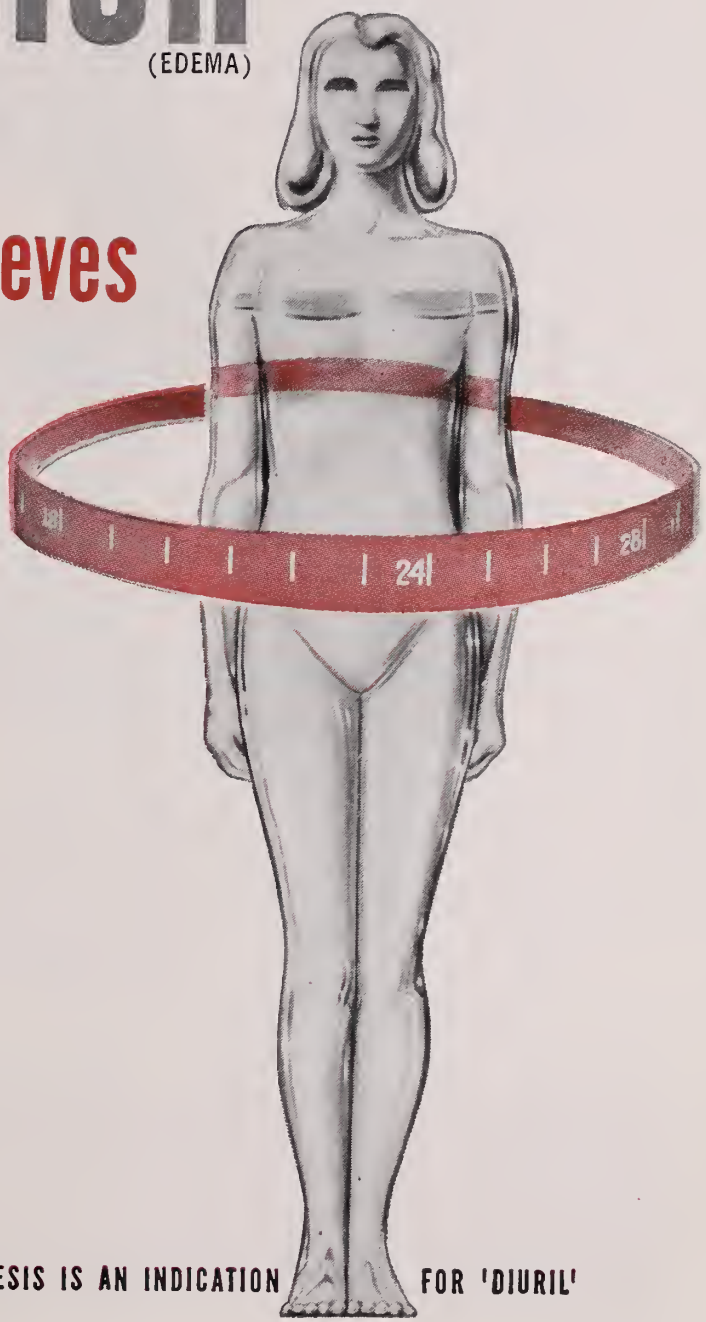
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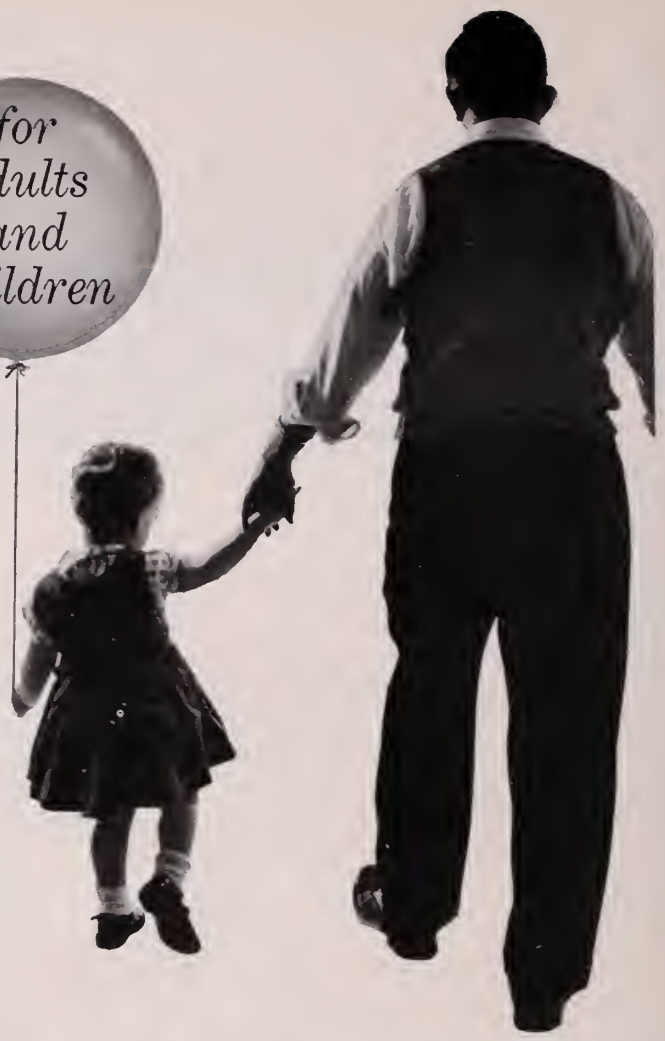
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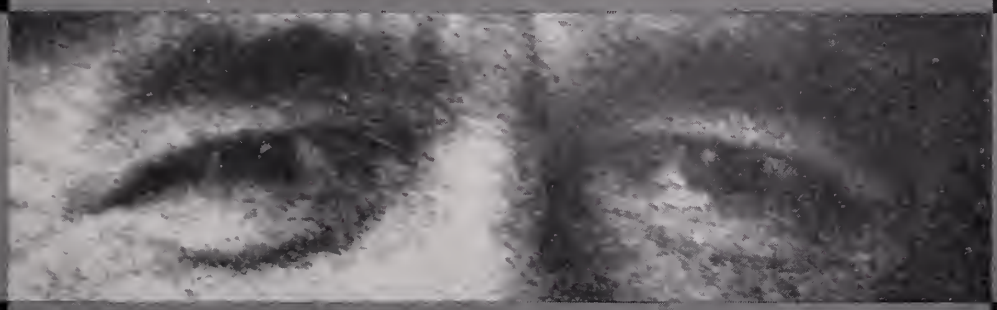
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Source—Hyman, M.: Some Aspects of Psychiatry in General Practice, GP *16*:83 (Oct.) 1957.

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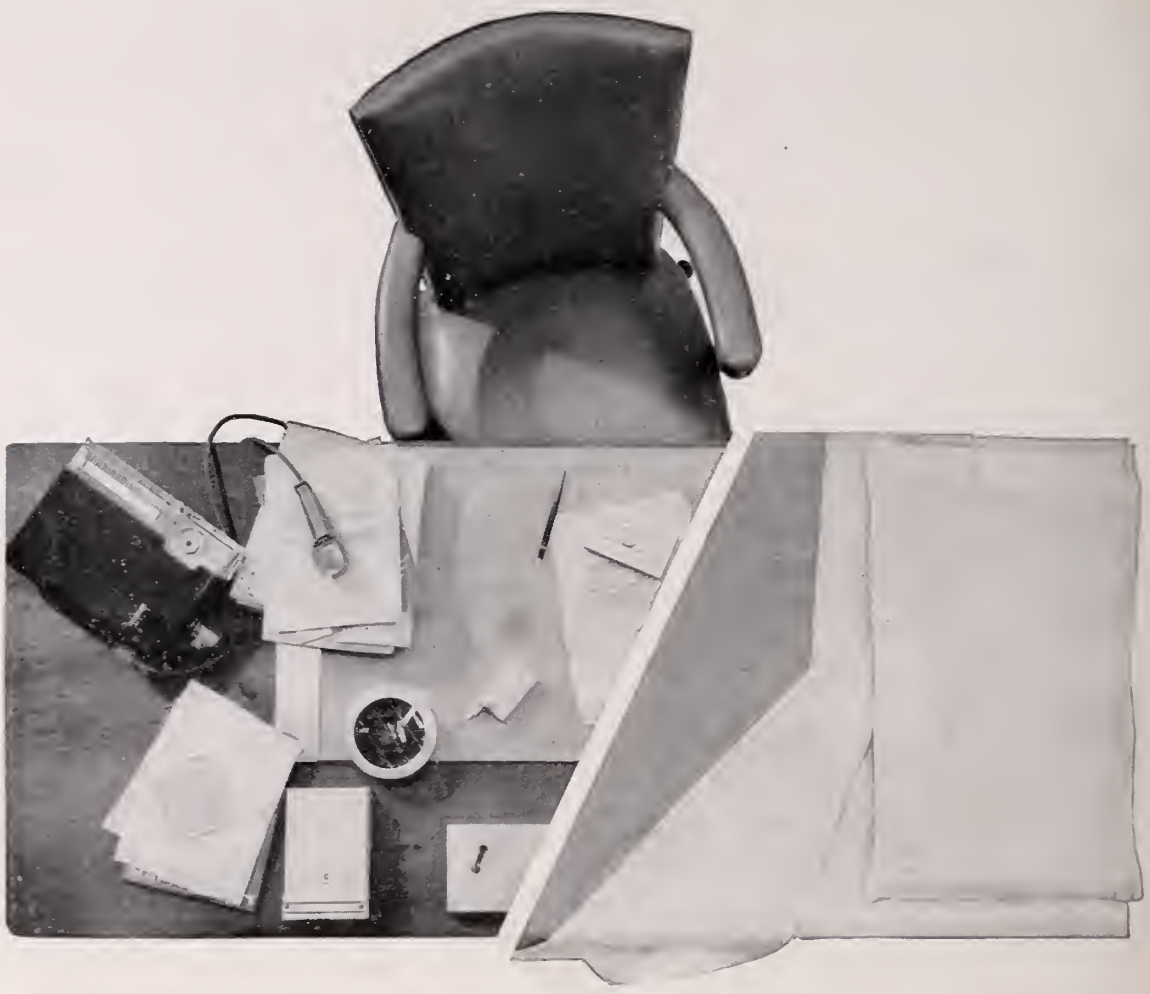
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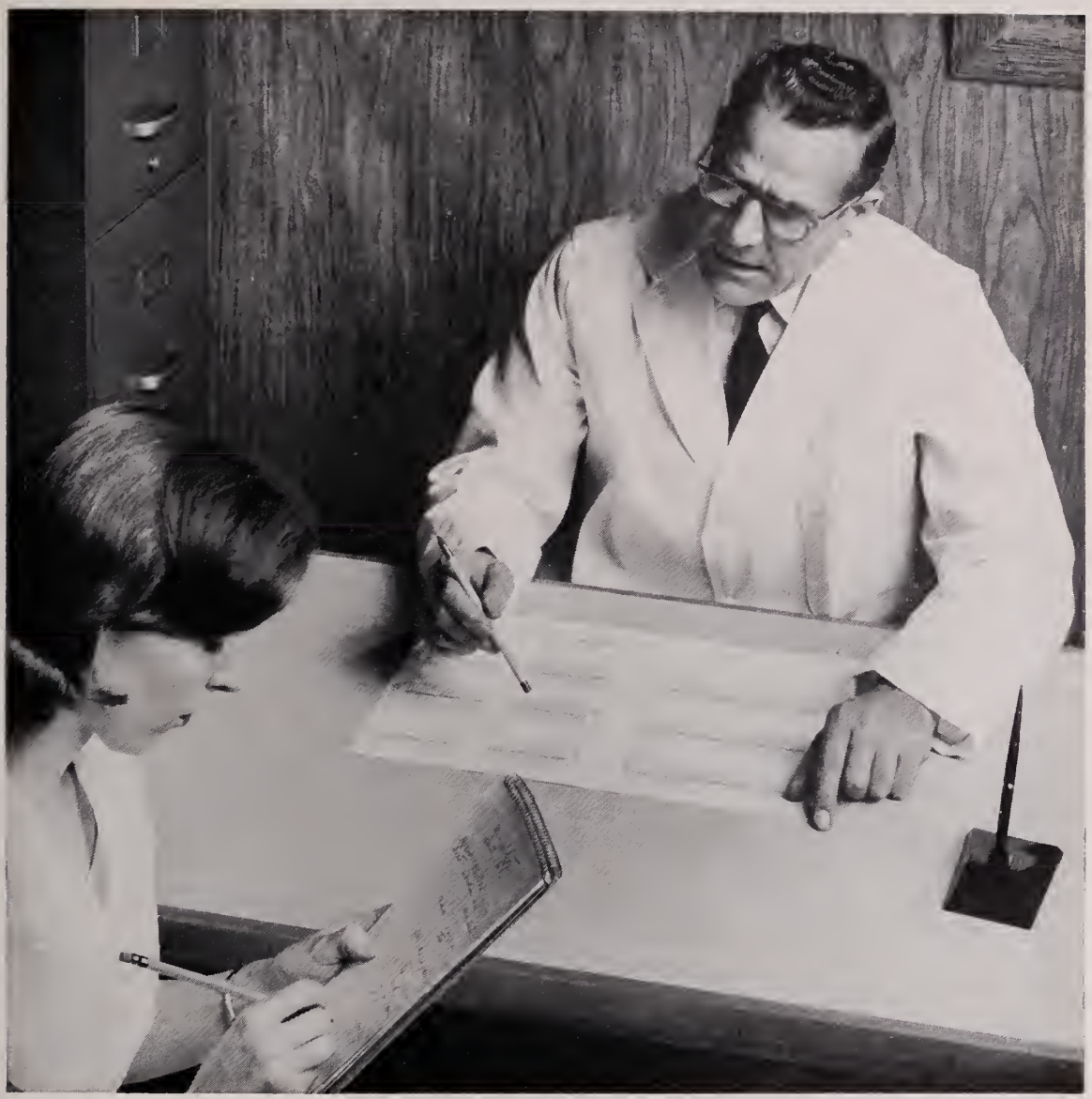
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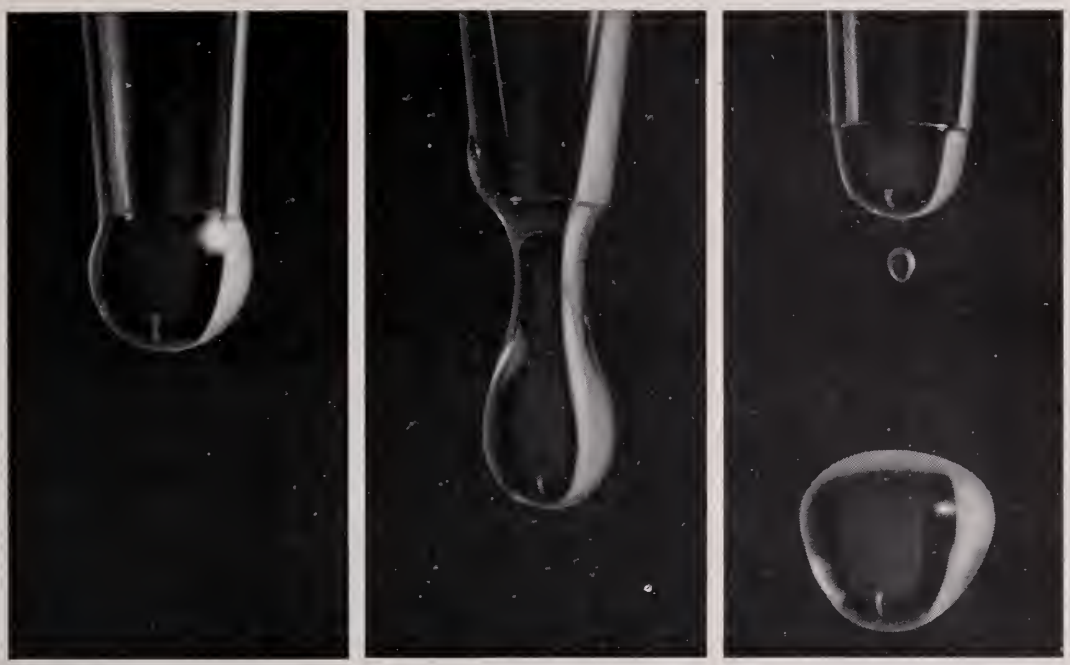
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1. Russek, H. I.: Postgrad. Med. *19*:562 (June) 1956.

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references:
1 Grieble, H.G., and Jackson, G.G.: Prolonged Treatment of Urinary-Tract Infections with Sulfamethoxypyridazine. *New England J. Med.* 258:1-7, 1958
2. Editorial. *New England J. Med.* 258:48-49, 1958.

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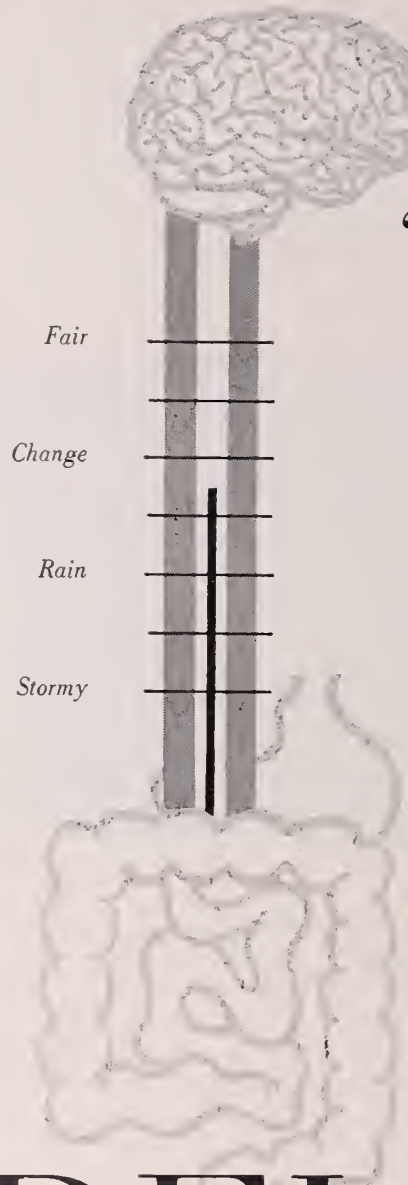
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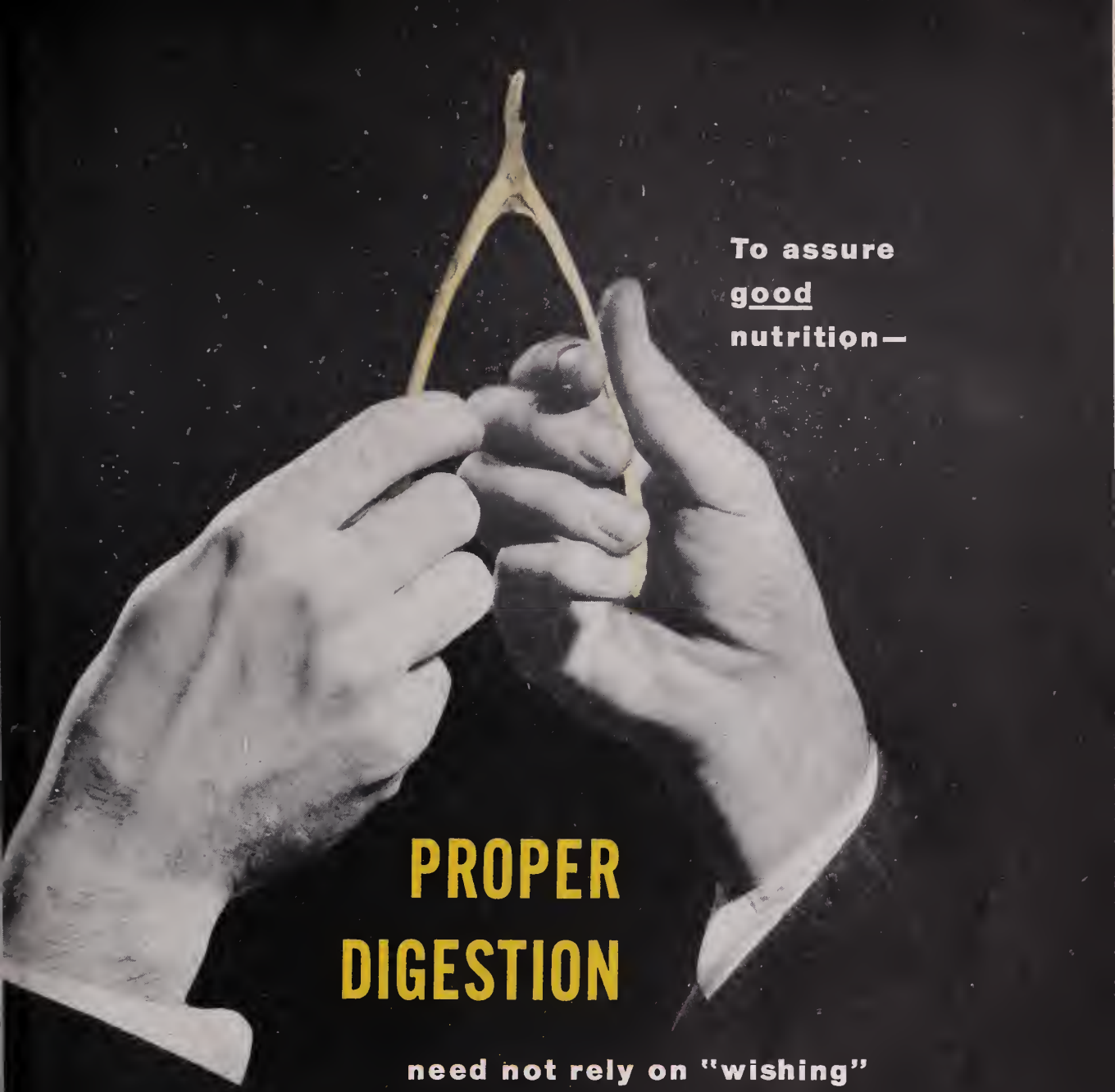
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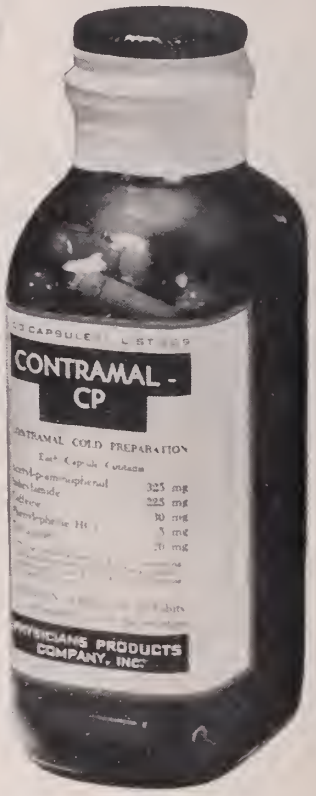
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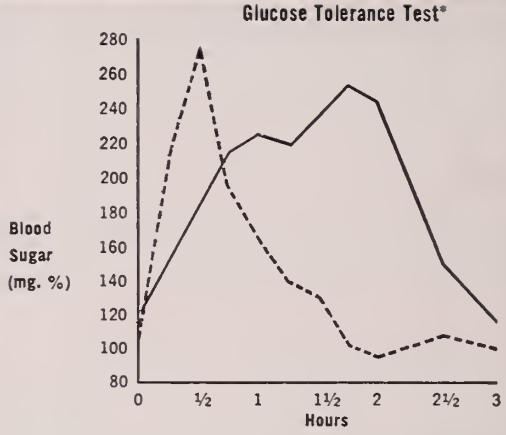
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*Constam, G. R.: Northwest Med. 56:919, 1957.

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Riseman, J. E. F., Altman, G. E., and Koretsky, S.: Nitroglycerin and Other Nitrites in the Treatment of Angina Pectoris, Circulation (Jan.) 1958.

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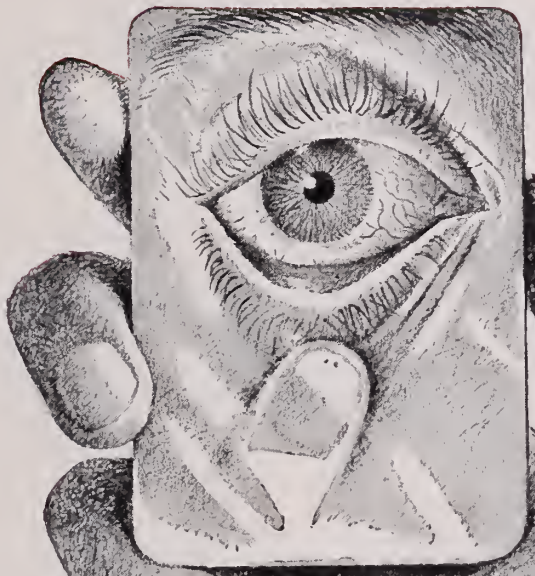
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The Virginia
MEDICAL
MONTHLY

August, 1958
Vol. 85, No. 8
Whole No. 1275

Guest Editorial . . . .

"The Art of the Practice of Medicine"

AS MEDICINE has become more specialized and as more and more emphasis has been placed on the scientific aspects, we have heard less and less about the art of the practice of our profession. It cannot be stressed enough that medical practice must be established firmly on the foundation of the knowledge of the science of medicine, but our patient will benefit to the fullest extent only when it is applied with what is generally called "the art of practice".

The art of practice of medicine probably reached its greatest development in the days of our fathers and grandfathers. Medicine was taught in those days almost entirely by men who devoted most of their time to private practice. Many graduates also served preceptorships with older practitioners, and so the art of practice was passed on almost unconsciously from one generation of physicians to another.

Today our medical students are being taught by an increasing number of full time teachers, many of whom do not engage in private practice at all, or to only a limited extent. In addition, there is so much science of medicine to be learned in four years that there is little time left to learn about such things as medical ethics, medical economics, and community relations. There is the danger, under these circumstances, that the student will tend to think of the patient only as a disease entity and to lose sight of him as a human being. In addition, the leaders in medical education are not always familiar with the problems that their graduates are faced with in the practice of medicine.

That our medical schools are cognizant of these dangers is evidenced by the fact that many of them have set up home care programs and special lectures on such subjects as: "Community Medicine" and "Social and Environmental Medicine". Whether or not these programs go far enough to really imbue the medical student with the importance of the art of practice as an adjunct to his knowledge of the science of medicine is questionable.

The development of the art of practice by a physician is most important if he is to have the confidence and trust of his patients. It is also most important if we are going to stop the advance of "creeping socialism" into medical practice.

What do we mean by the art of practice of medicine? In a way it is an ethereal thing which is difficult to define. Some people feel that it is something that comes from within a person and cannot be taught. However, we believe that it can be developed in an individual. The most important thing, probably, is that we must think of our patient as another human being, and, in this connection, we must consider him in his entirety and in his relationship to his family and to his environment. We must be sympathetic; we must take the time to explain the patient's condition to him or to his family; we must be willing to discuss finances, particularly when unusual expenses are involved; and we must insist on consultation when we are faced with a problem which has us stymied or is beyond our ability to handle.

Sometimes it is a good idea to stop and ask ourselves what our reaction would be if we or some member of our family were managed in a certain way. It may be difficult to think of ourselves with tables reversed, but a moment's meditation on the Golden Rule should quickly change this.

Yes, times are changing, but we shall continue to serve mankind as we have in the past and for generations to come, if we are as well founded in the art of practice as we are in the science of medicine.

Benjamin W. Rawles, Jr., M.D.

ANNUAL MEETING

THE MEDICAL SOCIETY OF VIRGINIA

OCTOBER 12-14, 1958

JEFFERSON HOTEL, RICHMOND

The Treatment of Severe Allergic Reactions to Insect Stings and Bites

J. WARRICK THOMAS, M.D.
Richmond, Virginia

IT IS NOT UNUSUAL to read of the sometimes fatal constitutional reactions resulting from an insect bite or sting. These reactions may occur on occasions in a matter of minutes. Such deaths could be reduced drastically if the mechanism and the reaction and treatment were fully appreciated by practitioners of medicine who are acquainted with these sensitive people. It is necessary that we distinguish between the sensitivity reaction and that reaction due only to the toxins which enter into the individual. We must further appreciate the fact that even the normal individual will have a reaction to toxins, probably formic acid. When a person is subjected to repeated stings, he develops altered reactions, ranging from exaggerated local swellings to the more severe systemic symptoms or even sudden death.

Early in the 19th century, Gould and Pyle[10] listed three cases of clear cut bee sensitivity, one of which occurred in 1811. It was pointed out by Brown[6] that when a honey bee stings, the stinger with the venom sac is retained. The bee is then brushed off and dies. It takes a bee two or three minutes to inject the whole amount of venom through the fine stinger, even though the bee has been brushed off. The smooth muscle in the wall of the venom sac continues to contract and force the venom. Therefore, the sooner the venom sac is taken out, the less venom will be injected.

In contrast to the honey bee, hornets, yellow jackets and bumble bees have a non-barbed stinger, and do not leave their venom sacs, and may sting again if caught inside a garment.

One of the most comprehensive reviews of insects and allergy was reported by Brown.[7] Today there are well over thirty insects reported as the direct cause of allergic diseases. The following is a partial list of the most important reported offending insects:

Table 1

Partial List of the Most Important Offending Insects

Ant	Deer fly	Mosquito
Beetle	Flea	May fly
Bedbug	House fly	Scabies
Bee	Locust	Sand fly
Body louse	Mushroom fly	Wasp
Caddis fly	Mite	Water flea
Chigger	Moth	Yellow jacket
Citrus fruit fly	Mexican kissing bug	

Benson and Semenov[3] brought out, in their study of allergy to bees, that the mechanism of these allergic reactions is the sensitiveness to the bee antigens rather than to the venom. They further showed that these hypersensitive individuals were sensitive to any part of the bee if it were introduced into the skin. Figley[9] and also Parlato[14] have demonstrated that the protein contained in these wind-borne particles from insects is sufficient to cause hay fever and asthma, which is usually of a seasonal nature.

Barnard[1] outlines a number of allergic reactions secondary to insect stings and bites to include urticaria and generalized edema, bronchitis, asthma, vascular collapse singularly or in combination. He further cities case reports and discusses immunization and emergency treatments. Benson[2] divides the types of sensitization into three groups:

1. Innocently by scales or dust in the wind.
2. Injection of venom through the sting.
3. Installation of salivary secretions.

Bowen[4] states that there are certain persons who fail to react to the bite of a given insect as we know. In others the effect is probably due, not to the secreted irritant, but to an acquired specific sensitization. Boycott[5] expressed further the fact that such insects as fleas and gnats as well as mosquitoes, when they bite the first time, cause practically no irritation, and when the bite begins to show irritated reactions, it is a sign of induced allergy to the insect. This may be the explanation why some people may have been stung or bitten by an insect in the past

Presented before the Florida Medical Association, Section on Allergy, May 11, 1958, Miami Beach, Florida.

J. Warrick Thomas, M.D., *Assistant Professor of Clinical Medicine, Medical College of Virginia, and Director of The Thomas Clinic.*

without any reaction, but have subsequently developed a sensitivity to the offending insect.

McDuffy[13] reported a patient who is very sensitive to insect bites. This patient was bitten by a deer fly on her arm and experienced marked swelling of the arm half again the normal size. Several days later, her foot swelled double the normal size following a bee sting. In both cases, this patient suffered intense pain for a period of some 48 hours.

McCreary[12] reports "The feeding of the Chrysops species on an acquaintenance of the writer produced an immediate swelling of the affected area. The swollen portion was circular, about two inches in diameter and usually about half an inch higher than normal. Considerable pain ensues, especially if the feeding puncture is about the head, accompanied by lassitude and drowsiness, which prevails for about two to three days. This indicates that during feeding, the material is injected into the wound which is entirely innocuous to most individuals, but definitely harmful to others."

In three cases cited by Barnard[1], details were taken from the New York State Health Department records and revealed that the cause of death in one patient was recorded as congestive heart failure and anaphylactic shock due to wasp sting, and the post mortem findings in the second case included "general vessel congestion with petechial hemorrhages due to toxemia from yellow jacket sting." Other significant conditions found were "acute gastro-enteritis and myocarditis". The cause of death in the third case was suffocation due to edema of the larynx from bee sting.

Wejului[18] and Jez-Blake[11] have reported autopsy findings in fatal bee and wasp cases, and important findings are as follows:

1. Edema of the lungs and larynx.
2. Emphysema of the lungs.
3. Over-distention of the right side of the heart.
4. Splanchnic dilatation and hepatic engorgement.
5. Petechial hemorrhages of the skin and mucous membrane.

Table No. 2 was taken from the State of Virginia Department of Health's Vital Statistics,[15] and shows that over a ten year period from 1947 to 1956, there were nine deaths, four of which followed a bee sting, one secondary to a wasp sting, and two from spider bites. One was unspecified.

Table No. 3 shows a report of 48 deaths in the United States in 1955, according to the Department of Health, Education and Welfare of the United States. I am sure that if other cases had been properly recognized, reported or diagnosed, it would have been many times that number. It was worthwhile to note that the highest incidence revealed California, five; Kentucky, four; Florida, Tennessee and Louisiana, three each.

Table 2

Deaths from Insect Bites in the State of Virginia for the Years 1947 to 1956

Year	Total No.	Type of Insect	Place of Occurrence
1947	1	bee	Giles County
1948	—	—	—
1949	2	1 spider	Sussex County
		1 unspecified	Scott County
1950	—	—	—
1951	2	1 spider	Isle of Wight County
		1 wasp	Montgomery County
1952	1	bee	Prince William County
1953	1	bee	Sussex County
1954	1	spider	Washington County
1955	1	bee	Carroll County
1956	—	—	—

I have had the opportunity of having under my observations some 22 cases of sensitivity to insect bites or stings, which have had varying degrees of reaction from severe local reactions, characterized by generalized edema, vesicular lesions, to the generalized constitutional reactions which were observed in seventeen of these patients.

Table 3

Deaths from Accidents Caused by Bites and Stings in 1955 as Reported by the Department of Health, Education and Welfare in the United States

State	No.	State	No.
Alabama	2	Mississippi	2
Arizona	1	New York	1
Arkansas	2	North Carolina	2
California	5	Ohio	2
Connecticut	2	Oregon	1
Florida	3	Rhode Island	1
Georgia	2	South Carolina	1
Illinois	2	Tennessee	3
Iowa	2	Texas	4
Kentucky	4	Utah	1
Louisiana	3	Virginia	1
Minnesota	1	Total	48

CASE REPORTS

Case #1—16319—F.H.F. A white male, aged 55, gave a history of an attack of unconsciousness in 1947 secondary to a wasp sting through his clothes on the hip. The patient became unconscious and was treated for shock at the Medical College of Virginia Emergency Room. During the succeeding ten year interim, the patient had been bitten recur-

rently by deer flies with considerable local swelling, but no other reaction. On May 25, 1957, while fishing, he was bitten on the forearm by a deer fly, and he experienced some local swelling. Two hours later, he was bitten again by another deer fly on the dorsum of his hand. He killed the fly, and there was considerable blood on his hand. Within sixty seconds he felt dizzy, so he turned the boat towards the dock and slipped down into the bottom of the boat. By the time the other party in the boat got him to the dock, 75 feet away, the patient was unconscious. A physician happened to be present, although he had no emergency kit. He stated that the patient was unconscious for approximately an hour. It was necessary to hold the patient's tongue out in order that he might breathe. Epinephrine was subsequently administered by the ambulance physician intracardially, to which patient responded, and he was carried to a Richmond hospital, some thirty miles away. He was placed in an oxygen tent, and remained in it overnight.

The insect was identified as a deer fly (Chrysops Vittata) by D. W. McCreary, Professor of Entomology, University of Delaware. Sensitivity studies by scratch test were carried out: bee, wasp and deer fly all showed a four plus reaction, and the mosquito reaction was one plus. The patient was started on hyposensitization treatment. We were unable to obtain currently a supply of deer fly antigen, so substituted May fly in the extract with the thought of the possibility of a common antigenic relationship, until such a time that we might obtain a supply of deer flies for extraction in the summer of 1958.

Approximately three and one half months after the patient was started on his program of hyposensitization with an extract containing bee, wasp, mosquito and may fly, he was again stung by a wasp. I saw him four hours after this sting. He had a large, swollen erythematous hot area, extending from his axilla to below his elbow on the inner arm; however there were no other symptoms in addition to this local reaction. He was given 4 mgs of Dimetane® and instructed to take one tablet every four hours. He subsequently reported he had no other side reactions and that the swelling subsided without any further distress. In view of his former history of a constitutional reaction with unconsciousness secondary to a wasp sting in 1947, we were encouraged to find that he did not have a severe reaction, and it was felt he had obtained some immunity to the multiple antigen therapy.

Case #2, 14116—Dr. E. C. Jr. A white male aged 48 was stung first in the summer of 1955 by a European giant horner (identified by The Virginia State Department of Entomology) in the outer portion of the right leg below the knee. Fifteen minutes later, his face became flushed and he felt apprehensive and lay down in bed. He had some dyspnea and complained that his chest was tight. He was given epinephrine by a physician who lives near by, and he was improved within five minutes, although ten minutes later he again complained of shortness of breath, nasal congestion, pain in his chest, and he felt too weak to sit up. A second injection of epinephrine was given and then he was very much improved and stated he felt fine, and had no recurrence of symptoms. The second episode occurred on August 26, 1956, while working around shrubbery, and he was stung presumably by a wasp, as they frequented the cedar trees. He was stung on the middle of the forefinger of the left hand. It became red and he felt drowsy and went upstairs to take a nap. Within fifteen minutes he complained of palpitation and his face was flushed. He took Pyribenzamine 50 mgs. and Chlor-Trimeton 20 mgs. intramuscularly. He developed dyspnea, and I saw the patient some twenty minutes later, at which time he was confused, dozing, and thrashing around in bed, complaining of abdominal pains, nausea, and headache. He was given 0.2 cc. of epinephrine 1/1,000. The left hand was placed in a basin of water containing ice cubes, and a tourniquet was applied proximal to the sting site. He was given 20 mgs. of Chlor-Trimeton intramuscularly, and 15 mgs. of Meticorten by mouth. The recurrence of the tightness in the chest and flushing of the face was rather dramatic with each release of the tourniquet. Equally dramatic was the gradual subsidence of true reaction with the reinflation of the blood pressure cuff, which was used as a tourniquet. The tourniquet was released recurrently over a period of an hour, by which time the patient was sufficiently recovered to leave the tourniquet off. Later in the day, the patient was perfectly all right, although he was aware of his having had a rough experience. Sensitivity studies with endermal tests showed bee 1/10,000 one plus reaction, wasp 1/10,000,000 one plus; ants 1/1,000,000,000 one plus, mosquito 1/10,000 one plus. The patient was started on hyposensitization treatments which have continued to date. His initial extract included bees, mosquitoes 1/1,000,000, wasp 1/1,000,000,000 and ants 1/100,000,000,000. Over a period of months he worked up to the dosage of bees and mosquitoes 1/10; wasp 1/10,000 and ants

1/1,000,000,000 and he is maintaining the dosage of 0.5cc every two weeks.

There is a subsequent history that in July of 1957 he was again stung by a wasp, but experienced only a local reaction which lasted approximately fifteen minutes. He had no other symptoms other than a mild slight swelling and itching. Other frank allergic diagnoses included drug allergy to Aspirin; history of migraine headaches; history of perennial allergic rhinitis coincident to tobacco smoke.

Case #3—J.E. A white female aged 24 who was seen in the emergency room complaining of generalized urticaria, tightness in her throat, angioneurotic edema of both eyes, face and hands, and a generalized pruritis. She was also slightly confused and her blood pressure was 100/50. She gave a history of having been stung five and a half hours earlier on the hand and eye. She was stung on the dorsum of her right hand and under the left eye. She gave a history of having been frequently stung by bees that had been attracted to the cotton candy booth where she worked. She was given Benadryl 50 mgs. every two hours for five doses. She also received epinephrine 1/1,000 0.2 cc. This patient worked at a cotton candy booth at a local fair ground, and as her symptoms became progressive, she developed some "swelling of the throat", urticaria, pruritis and was confused.

Initial treatment in the emergency room consisted of 0.2 cc. of epinephrine 1/1,000, which offered her very slight improvement. Then she was given Dimetane Injectable®, 20 mgs. intravenously in 10 cc. of 5% glucose. After approximately fifteen minutes her blood pressure returned to normal (115/80) and the patient was definitely improved. The swelling of her eyes seemed to be lessening, and the questionable tracheal swelling seemed to be less. She was also seen by an otolaryngologist during the acute phase, and he could not demonstrate any frank edema of the larynx. The patient complained of slight drowsiness, and approximately two hours after being admitted to the emergency room, she was discharged and requested to report to the clinic for sensitivity studies. We explained to the patient the desirability of changing her work, and also considering immunizations; however she did not have any follow-up. Her discharge prescription was for Pyribenzamine 50 mg. tablets to take one every four hours for itching and swelling.

Among the symptoms that one observes coincident to insect bites, stings, or the inhalation of mascerated particles of the insect of their eminations, are the following:

Table 4

Symptoms Encountered Secondary to Insect Bites and Stings

Aching and joint swelling	Local swelling
Angioneurotic edema	Loss of consciousness
Asthma	Nausea
Convulsion	Tightness of chest and sensation of impending disaster
Generalized urticaria	Shock
Generalized itching	Shortness of breath and cough
Headache	Schoenlein-Henoch syndrome

In the consideration of symptoms, Swinny[16] stated that mechanisms of reaction, the severity of symptoms of anaphylactic shock are dependent upon three factors: (a) the antigenisity of the foreign substance; (b) the quantity of the substance and (c) the degree of sensitivity of the subject. In the case quoted by Swinny, the patient died from a bee sting, while cutting a hedge, within three minutes after being stung. He was unconscious, cyanotic, with involuntary urination, and coming from his mouth was frothy blood. Swinny further emphasized the point that anaphylactic shock from insects is not generally known to the profession or to the coroners, as in this case, the cause of death was quoted as "Natural Cause unknown". He feels that there are many cases of heart disease, cerebral accidents, and a number of sudden deaths due to insects. He estimates that as many as twenty to thirty deaths a year probably occur in Texas.

TREATMENT

In the consideration of treatment of severe allergic reactions to insect stings and bites, the therapy is divided into two general headings:

I. *Immediate Treatment* which may be further subdivided into (a) local treatment and (b) systemic treatment, which may be life saving.

   (a) Local therapy with the removal of the sting immediately if present, wet alkaline packs such as soda bicarbonate, ammonia water, antihistamine ointments and ice packs.

   (b) Systemic therapy includes application of tourniquets proximal to sting sites; epinephrine 1/1,000 0.2 cc. to 0.5 cc. proximal to the tourniquet, and 0.2 cc. in the sting site; antihistamines intravenous (Dimetane Injectable® 20 mgs. or Chlor-Trimeton Injectable 20 mgs. or Benadryl Injectable 10 mgs.). The same dosage may be given in-

tramuscularly if the emergency is not grave. Treatment of shock, including warmth, stretching patient out and elevated head, oxygen for cyanosis, recurrent checking of blood pressure and pulse, hospitalization if at all possible in severe cases, intravenous steroids such as Solu-Cortef 100 mgs. or intravenous ACTH 40 units in 5% glucose in an infusion and caffeine and sodium benzoate or other stimulants as necessary.

Barnard[1], Swinny[16], and Etter[8] and others have outlined in considerable detail, the preferred immediate local as well as systemic forms of treatment, and I have instituted an emergency program which is outlined to the patient, along similar lines to the one Barnard instituted, and have also employed the use of an emergency kit, containing epinephrine 1/1,000, two 1 cc. ampules; two 1 cc. vials of injectable antihistamine, one to two large tourniquets sufficiently long to go around the thigh; two sterile hypodermic syringes; 1 cc. and 2 cc. with needles; antihistamine tablets or capsules and the availability of 15 mgs. of Prednisone or Prednisolone in 5 mg. tablets (three tablets). It is desirable that the physician give the patient a similar list and stock of drugs as above, and to outline in writing on a prescription form, the procedures as set form, and state order in which each procedure should come, depending upon the type of reaction and the former experience of the patient. It should further be emphasized that the patient should seek a physician's immediate services or be taken to the hospital for emergency treatment.

There are those individuals who have learned from previous experience that these reactions are so rapid that within two to three minutes they could go into these constitutional reactions, and they should acquaint other persons with the above emergency procedures and where such emergency kits are kept such as in the trunk of a car, summer cottage, at home or elsewhere. The above considerations in severe instances, if instituted early, may prove to be life saving. It is noteworthy to state that if the patient survives a few minutes after the sting, up to half an hour, that usually the peak of reaction may be considered, and therapy should be continued until all acute distress has subsided. One should not rely only on oral therapy in these explosive reactions, but rather systemic, intravenous or intramuscular therapy is mandatory.

II. *Desensitization Therapy:* It is highly desirable, if possible, to determine from the patient, the exact type or types of insects that have either stung or bitten the patient. Extracts should be obtained from a reputable pharmaceutical house, along with explicit instructions regarding the preparation or making solutions of powdered or defatted insects, and serial dilutions of same. It is desirable at times, if facilities are available, that the allergist or physician secure the offending insects and prepare extracts tailored to the patient's needs. I have had such circumstances to confront me where I have had to obtain such insects as European giant hornets, fire ants and deer flies. A partial list of possible commercial sources of extracts are tabulated in the following table:

Table 5

Possible Commercial Sources of Extracts

Manufaeturer	Produet
C. E. Blatt 10810 East 25th St. Terrace Independenee, Missouri	Powdered, defatted insects
Cutter Laboratories Berkeley 10, California	Graduated dilution of bee extract
Center Laboratories, Inc. Port Washington, New York	Powdered, defatted insects
Greer Drug Company P. O. Box 800 Lenoir, North Carolina	Powdered, defatted inseets
Hollister-Stier 127 North Dearborn Street Chieago 2, Illinois	Serial dilutions of several inseet antigens and powdered defatted insects
Sharp & Sharp P. O. Box 18 Everett, Washington	Powdered, defatted inseets
Southwest Mold & Antigen Labs. 1009 N. E. 17th Street Oklahoma City 11, Oklahoma	Powdered, defatted inseets
Steman Laboratories, Inc. 1205 N. E. 18th Street Oklahoma City 11, Oklahoma	Powdered, defatted insects

Further consideration should be given to the method of determining the sensitivity of the individual offending insects. If this is not known, the patient should be tested with a group of representative insects such as bees, wasps, yellow jackets, hornets, ants and mosquitoes. The technical procedure of carrying out tests should include both scratch and intracutaneous tests of these extracts prepared in serial dilutions, starting with 1/1,000,000,000 and multiples of ten down to the 1/10 or

concentrated extract. The application of these tests should always be on a patient's arm or leg, where a tourniquet may be applied proximal to the test. Emergency drugs such as outlined in the emergency kit should be available. Scratch tests with these varying dilutions should be carried out prior to doing intracutaneous tests. Adequate time should be taken for the application of tests to insure the patient of additional time, after the tests are completed, to remain in the office for one hour or longer, as delayed reactions have been experienced in certain instances.

In the consideration of the proper dilution in which the patient should be started on a program of hyposensitization, it is well to review the titration of the test dilutions and start the dilution at least 100 to 1,000 times weaker than that of the dilution of extract that shows a positive reaction. Only 0.05 cc. should be given at the first injection. Accelerated injections in the very dilute dilutions may be cautiously considered. Initially, the interval between the injections may be daily, subsequently three times a week, twice a week, at weekly intervals, and finally depending upon the tolerance of the patient and the concentration of the extract, the interval may be extended up to two to four weeks between injections during the winter months. However, during the potential season of exposure, the injections should be given not in excess of every two weeks, and preferably at shorter intervals.

It is interesting to note that in Table No. 6, of the 18 patients who were hyposensitized, 11 of whom were subsequently stung or bitten, in no instance was there any systemic reaction. Ten of the eleven patients had slight local reactions, and only one patient had considerable local reaction, with red streaks extending up the arm. This patient followed a program of hyposensitization for a period of two years, and then left off his injections, and he had had no treatments for a period of a year. The percentage of patients subsequently stung or bitten was 61.11% and this would indicate a 100% response to the treatment in that none of these patients had systemic reactions.

Table 6

Results of Therapy of Subsequently Stung or Bitten Patients

No. Hyposensitized	No. Subsequently stung or bitten	Reaction	
		Local	Systemic
18	11	11	0

DISCUSSION

Approximately 50% of the cases that have come under my observation that have received hyposensitization therapy have subsequently been stung or bitten, and to date we have not observed any patient to have a subsequent major constitutional reaction. A further report in this connection was given me by Swinny[17]—"You may be interested to know that I have now hyposensitized 41 people who have had anaphylactic type of reactions to insect stings, especially our yellow wasp. Nineteen of them have reported subsequent stings with only local reactions,

Table 7

Classification of Clinical Severity of Sting Reaction

Type of Reaction	No. of Patients	Symptoms and Signs
Slight general reaction	8	Generalized urticaria Itching Malaise Anxiety
General reaction	4	Any of the above plus two or more of the following: Generalized edema, sneezing, constriction of the chest, dizziness, abdominal pain, nausea or vomiting.
Severe general reactions	4	Any of the above plus two or more of the following: Dyspnea, dysphagia and marked weakness, confusion, feeling of impending disaster.
Shock reaction	5	Any of the above plus two or more of the following: Cyanosis, fall in blood pressure, collapse, incontinence, unconsciousness.

so apparently the treatment is quite effective. I am sure that if there had been any severe reactions or death, I would have heard about them. I think it more practical to treat with mixed hymenoptera extracts because so many of the patients do not know which insect has stung them." The sequence of insect extract dosage is dependent upon the localized systemic responses to individual injections. The dosage should be held below the reactions level, as overdose reactions to therapeutic injections have been reported by others as well as experienced by me.

The author again wishes to emphasize the critical consideration that should be given to the insect sensitive patients by the physicians, and the family of the patient should be impressed with the necessity of immunizations and their lifesaving potentialities.

Table No. 7 classifies the degree of severity and sets forth these groups according to signs and symptoms. This classification is set up along the lines of Perlman's discussion at the American Academy of Allergy Meeting at Philadelphia in 1958, which paper will no doubt be published in the Journal of Allergy.

The grouping of patients according to the number of insects to which they showed positive reactions is seen in Table No. 8.

TABLE 8

TOTAL POSITIVE TEST IN ALL PATIENTS

Positive Test to:	No. of Patients	Per Cent
No test made	2	—
1 insect	5	26.3
2 insects	1	5.2
3 insects	4	21.0
4 insects	7	36.9
5 insects	2	10.6
Total	19	100.0%

SUMMARY

A partial review of the literature and sources of extensive reviews have been outlined and listed in the bibliography. Cases have been presented and include individuals who have been found to have a known (and confirmed in the majority of instances) sensitivity to the following insects: bee, wasp, yellow jacket, hornet, deer fly, sand fly, ants, etc. Although not included in this group, the author has seen one or more cases of patients having severe reactions from May fly, caddis fly, bed bug, chiggers, mosquitoes and moths.

Therapy has been divided into local and systemic therapy which includes emergency therapy, and the consideration of hyposensitization, and the importance of written instructions and the use of an emergency kit have been emphasized.

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DISCUSSIONS

S. D. KLOTZ, M.D., Orlando, Florida

First, I wish to thank Dr. Thomas for the privilege and honor of discussing his paper. Yet in accepting, I was well aware that if my past experiences with him were confirmed, Dr. Thomas' paper would cover the topic so thor-

oughly in all its divers clinical manifestations that any further discussion would be repetitive. And, so be it.

I should like to make some comments about the stinging insects of the Hymenoptera family that may be of interest. The stinger from such insects is a modified ovipositor and, therefore, no male insect can sting. As Dr. Thomas points out, only the honey bee extrudes its stinger and this continues to contract and eject the venom. Thus, when stung, the stinger should be removed immediately, not by seizing it and pulling it out (this only forces in more poison) but by pressing it out by means of a finger nail or a knife blade.

Recent studies of the chemistry of the bee venom show it to contain five to six proteins and these have histamine-like properties, neurotoxins, hemorrhagins, cytolysins for endothelial cells, and hemolytic factors. There has been shown to be very little difference between the antigen contained in the venom sac and the antigen present in the anterior abdominal wall of the insect. Therefore, most preparations made from the entire insect body can successfully hypersensitize specifically allergic individuals. Dr. Mary H. Loveless has demonstrated specific blocking antibodies following hypersensitizing or immunizing with insect venom. By the use of highly purified extracts from carefully dissected venom sacs, she feels she can successfully immunize potential victims with only several injections of the venom.

Most authorities feel there are frequent cross reactions and, since many patients cannot accurately describe which insect bit them, it is best to test for all and perhaps use a mixed antigen. Dr. Thomas noted that more than 60% of his patients gave reactions to three or more insects.

I wish to emphasize the need of extreme caution in skin testing sensitive individuals. I always start with 1/1,000,000 dilution and, even then, I found it once produced a near fatal anaphylactic reaction. Never allow your patient to leave the office less than thirty minutes after the skin test or treatment and he should be *within* your sight. I still feel epinephrine hydrochloride is the most valuable drug for immediate use in these emergencies.

Dr. Thomas' observation that most people do not feel insect bites until they develop sensitivity is very interesting. Other doctors have made the observations that after careful scrutiny of the patients' histories, the insects seem to show a preference for the sensitive individual. They say these individuals are insect prone and will be singled out by the insect from a group. A fellow allergist from Texas, Dr. Warren J. Raymer, noted that one such individual, after she had received a successful course of hyposensitization treatments, seemed to have lost this insect affinity. I wonder what your observations have been in regard to this, Dr. Thomas.

In Florida, with its rapid growth and housing extending into uninhabited land sites, scorpions can be a problem. They have been so in the Southwest for a long time, and my Texas confreres have commented on the vast allergenicity from the venom of this insect. It is impossible to produce a potent antigen even from the pure venom. In a recent report by Dr. R. M. Johnson in the Journal of Allergy, he has failed to induce an allergic response even in such an easily sensitized animal as the guinea pig.

In closing, I wish to thank Dr. Thomas for honoring our society with his presence, so that we may reap the benefit of his experience in this dramatic and, at times, catastrophic entity.

ETHAN ALLAN BROWN, M.D., Boston, Massachusetts

Dr. Thomas has emphasized the fact that many patients are sensitive to stings or bites of insects. Some of these seek medical attention for the acute distress of general, general severe or general shock reactions. Others having suffered spontaneously or following emergency treatment do nothing for their sensitivity because they do not know that prophylactic injection therapy is available. When all allergic patients are questioned regarding insect sting or bite sensitivity a surprisingly large number are discovered to be sensitive to the degree that both hyposensitization is desirable and the availability of a kit for emergency treatment is advisable. Wide publicity should be given to studies of the type Dr. Thomas describes so that many deaths due to "unknown causes" can be prevented.

Birth Rate Slow-Down

It appears that the current business recession is teaming up with the depression of the 1930's to force a slow-down in our booming birth rate. The two slumps are partly to blame for the present decline in the number of marriages and births, according to an editorial in the June 21st Journal of the American Medical Association.

The editorial said, "These two declines suggest but do not prove that the end of the baby boom is in sight." "Because of the comparatively small number of births during the 1930's, the number of youths attaining marriageable age continues to be fewer than can be expected during the 1960's."

While the number of births still exceeds 300,000 a month, the first quarter of 1958 saw a reduction of 7,000 births over a similar period a year ago.

This decline "is due in some measure to the business recession."

This may only be an interval in an irregular rise in births and marriages, it said, but it "should make one hesitate about predicting a population explosion in the United States."

Clinical Use of the Plasma Acetone Test in Diabetic Acidosis

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Richmond, Virginia

DIABETIC ACIDOSIS (or ketosis) is a medical emergency. The prognosis of diabetic acidosis is influenced by many factors, including the age of the patient, complicating diseases, the depth of unconsciousness, the duration of acidosis and adequate treatment.[1-4] Certain of these factors cannot be altered (example, the age of the patient, and irreversible complicating conditions). However, one factor, the duration of acidosis, can be modified by diagnosing the condition as early as possible and instituting adequate insulin therapy immediately. By means of a simple qualitative test for acetone in plasma the diagnosis of diabetic acidosis can now be confirmed, whether in the home, at the bedside or in a hospital ward and proper insulin treatment begun at once.

Excellent summaries of the pathologic physiology of diabetic acidosis and its overall management are available and will not be reviewed in detail.[5,6,15] It should be stated, however, that when there is an insufficiency of insulin, attempts are made to satisfy energy requirements by the degradation of fats and proteins. The production of fractional products from fat and protein sources exceeds both their utilization by the body economy and their excretion and, hence, they begin to accumulate. Certain of these products chiefly from fats have a ketone configuration and are collectively termed "ketone bodies". Individually, they are known as acetone, diacetic or acetoacetic acid and beta hydroxybutyric acid. Each in minute amounts is a normally present, harmless metabolite; however, when present in increased amounts they are the forewarners of danger and even death. Perhaps it is more proper to say that when these products are present in large concentrations they are not only harmful in themselves but are an indirect measure of many deleterious products and forces going on in the body at the same time.[7]

METHODS

The Rothera Test for ketones in the urine based on the nitroprusside reaction was first used in detecting ketones in blood by Mary B. Wishart in 1915. Although her results were not published, Allen[8] refers to them and the test has since been known as the Rothera-Wishart Test. For many years, Duncan and his co-workers[6,9] have used the test as a valuable diagnostic aid for the detection of ketonemia. As diabetic ketosis becomes more severe there is a progressive resistance to the effectiveness of insulin. Hence, he found that an estimation of the degree of depth of ketosis present prior to the treatment of diabetic coma was useful in calculating the initial requirements for insulin. As a result of their observations it was noted also that the marked resistance to insulin encountered during ketosis subsided with the disappearance of ketonemia. Others have confirmed these results.[10,11] The test presently employed, based on the nitroprusside reaction for acetone, is done using commercially available test powders (Denco) or tablets (Acetest). The purple color reaction produced is resultant from acetone in solution and perhaps to some extent by acetoacetic acid; betahydroxybutyric acid does not react with reagent. The technique consists of using one drop of the patient's plasma and testing it undiluted upon the nitroprusside reagents. The result is interpreted with the aid of a color chart in 30 seconds as 1 plus to 4 plus, depending upon the intensity of color, varying from a purple tint, to lavender, to a medium purple, to a deep purple.

In the home, plasma is obtained by permitting oxalated blood to settle a few minutes or clotted blood to begin forming a clot. The admixture of plasma and enough red blood cells to give a pink color to plasma does not obscure the ready recognition of a 4 plus reaction.

Undiluted centrifuged plasma and serial dilutions of plasma were tested for acetone on a general medicine ward. Routine tests of urine sugar and acetone, and blood sugar and carbon dioxide combining power were also done. If the undiluted plasma acetone was 4 plus as described above, the plasma was diluted 1:1 with tap water giving a 50% solution and retested for acetone. If this dilution were 4 plus for acetone another 50-50 dilution was done, and so

From the Medical Service, McGuire Veterans Administration Hospital, Richmond, Virginia.

Table 1

Diabetic Acidosis, Severe

Patient*	CO_2 Comb. Power mEq/L	Blood Sugar mgm. %	Urine		Plasma Acetone				Total Insulin Units
			Sugar	Acetone	Undl. 100%	1:1 50%	1:4 25%	1:8 12.5%	
60 876	3	700	4+	4+	4+				285
62 676	6	210	1+	4+	4+	4+	?	1+	760
64 370	9	960	4+	4+	4+	4+	4+	3+	1300
72 117	13	808	4+	4+	4+	3+	1+		365
72 138	6	936	4+	4+	4+	4+	3+	2+	900
73 852	37	1020	4+	4+	4+	2+			175
75 951	16	215	4+	4+	4+				220
75 972	7	325	4+	4+	4+	2+			550
77 211	10	420	4+	4+	4+	1+			250
81 506	6	430	4+	4+	4+	3+			325
83 404	5	528	4+	4+	4+	4+	2+		450
87 867	4.8	908	4+	2+	4+	3+			850
88 953	13	800	4+	4+	4+	2+			325

*13 cases arranged according to hospital registration numbers.

on until acetone was ultimately tested in 100%, 50%, 25% and 12.5% plasma.

RESULTS

The extensive experience of Duncan with the plasma acetone test has led him to believe that the "detection of glycosuria and a Grade 4 reaction for ketonemia in a patient exhibiting clinical evidences of diabetic ketosis affords a reliable diagnosis of diabetic coma." His criteria have been employed in the diagnosis of thirteen cases of severe diabetic acidosis presented herein. All patients were adult male diabetics admitted to a general medicine ward at the McGuire Veterans Administration Hospital. All patients showed a 4 plus reaction for urine acetone and sugar and plasma acetone except one whose reaction for sugar was only 1 plus and one whose urine acetone was 2 plus on the first occasion. The initial dose of insulin was determined in nearly every case on the basis of 100 units of regular insulin for every 4 plus reaction of plasma acetone. Subsequent doses of 50 units of regular insulin were given every half hour until a decrease in plasma acetone concentration was noted or until a failure to decrease within a four to six hour period justified an increase in dose of insulin. Usually, the plasma acetone concentration decreased within the six hour period, heralding the return of insulin sensitiveness. The total amounts of insulin needed for recovery as measured by a decrease of urine acetone to a trace or negative were recorded. The results are tabulated in Table 1. There seemed to be no strict relationship between the blood sugar level and/or the carbon dioxide combining power on the one hand and the insulin requirement on the other. In two patients, the carbon dioxide combining power was considerably higher than normal. These were instances of diabetic acidosis complicated by acute alcoholism and probably alcoholic gastritis in whom protracted vomiting was present for three or more days and in whom the basic dose of long-lasting insulin was interrupted. The relationship between the severity of acidosis as measured by serial dilutions of plasma acetone and the total insulin dose is shown in Table 2.

Table 2

Diabetic Acidosis, Severe

Plasma Acetone* Dilution				Total Insulin Units
Undil. 100%	1:1 50%	1:4 25%	1:8 12.5%	
4+	4+	4+	3+	1300
4+	4+	3+	2+	900
4+	4+	?	1+	760
4+	4+	2+		450
4+	3+	1+		365
4+	3+			850
4+	3+			325
4+	3+			285
4+	2+			550
4+	2+			325
4+	2+			175
4+	1+			250
4+	?			220

*Cases arranged according to decreasing plasma acetone concentration.

Table 3

Management of a Typical Case of Diabetic Acidosis

Time	CO_2	Na.	K.	Cl.	Blood Sugar mgm %	% Plasma Acetone				Urine		Insulin
	mEq/L					100	50	25	12.5	Sugar	Acetone	
2:00 P.M.	6	128	5.7	94	936	4	4	3	2	4+	4+	200 U.
2:30												50
3:00												50
3:30										4+	4+	50
4:00												50
4:30										4+	4+	50
5:00												50
5:30										4+	4+	50
6:00												50
6:30						4	3	2	1	4+	4+	50
7:00												50
7:30										4+	4+	50
8:00	13	138	4.0	108	240	3	2	1	0	4+	4+	50
8:30										3+	4+	
9:00										2+	4+	50
9:30						2	1	0		4+	2+	
10:00						tr.				3+	tr.	50
10:30						0						
11:00 etc.												
											Total	900

Table 3 shows the usefulness of the plasma acetone test in the management of a typical case of severe diabetic acidosis. The initial dose of regular insulin used was 200 units since the acetone test was 4 plus in both the undiluted plasma and the 50% dilution. In four and a half hours the acetone concentration began to decline and improvement in the patient's condition was also noted. After six hours of management, plasma acetone had reduced to three plus and the return of insulin sensitiveness was therefore anticipated. This was confirmed by the reduced need for insulin and the further disappearance of acetone from his plasma in the next three hours. A similar analogy may be seen in milder cases. In another group of nine cases with glycosuria and ketonuria, but whose undiluted plasma acetone tests were less than 4 plus, insulin requirements were less but still in proportion to the ketonemia. These milder cases are shown in Table 4.

Table 4

Diabetic Acidosis, Mild

Patient	Plasma Acetone* Dilution				Total Insulin Units
	Undil. 100%	1:1 50%	1:4 25%	1:8 12.5%	
1	3+	1+	0		250
2	3+	1+			175
3	2+				350
4	2+				250
5	2+				100
6	1+				140
7	1+				80
8	0				40
9	0				45

(All patients had four plus tests for urine acetone and sugar.)

*Cases arranged according to decreasing plasma acetone concentration.

An unconscious patient was recently brought to the hospital; his immediate past history was unknown. From previous hospital records he was a known, poorly controlled diabetic, alcoholic and epileptic. He was dehydrated and had hypotonic reflexes and rapid respirations. Urine sugar and acetone were both strongly positive. However, a plasma acetone test performed on the ward in less than four minutes was only 2 plus and, hence, we felt that the severe depth of unconsciousness was not due to diabetic coma. See patient 5 in Table 4. According to Duncan, after more than 30 years of experience with the test, the finding of a plasma acetone test less than 4 plus in an unconscious patient excludes diabetic coma as the cause for the unconsciousness. A similar impression in this patient was confirmed by the complete disappearance of urine acetone and the presence of insulin sensitiveness upon the giving of only 20 units of insulin every hour for five doses. Subsequent history revealed his unconsciousness was due to a series of grand mal epileptic attacks prior to admission.

DISCUSSION

This simple "bedside" test has its greatest advantage in the rapid confirmation or exclusion of ketosis as a major factor in a patient's illness. If ketonemia is found to be a major factor, appropriate insulin therapy can be instituted immediately by the family physician in the home and before transportation to a hospital with the assurance that the diagnosis has been confirmed. As mentioned earlier, one of the major factors affecting survival in severe diabetic acidosis is the *duration* of acidosis. This observation may be stated in the form of a warning: "If insulin therapy is delayed, whether before or after arrival at the hospital, the death rate rises!" Insulin should never be delayed or withheld if severe ketosis is present upon routine testing. Of course, other measures beyond the scope of this paper used to combat diabetic acidosis should be employed as well.

The finding of a 4 plus reaction for acetone is apparently reserved for the diabetic in acidosis. Among patients who are unconscious due to diabetic acidosis, the depth and duration of unconsciousness are important factors in prognosis. Kety[2] correlated the survival of patients in diabetic coma with cerebral oxygen consumption. Below a certain critical level of oxygen consumption, the patients did not survive. The lowest levels of oxygen consumed were found in patients with the highest concentrations of blood ketones.

Other conditions may yield slight to moderate amounts of acetone in plasma. These include malnutrition, severe restriction of calories by dieting, alcoholism and uremia. Many of these conditions are associated with dehydration and unconsciousness. However, the degree of ketosis in these conditions is never sufficient to account for unconsciousness. Other authors feel this simple qualitative test compares favorably with quantitative tests for ketone bodies in both plasma and urine in diabetic acidosis and other conditions.[10,11,12]

Too much dependency should not be placed upon specific concentrations of ketones in urine. In untreated diabetic acidosis, blood viscosity is increased and blood volume is reduced. In the kidney there is a decreased renal blood flow, decreased glomerular filtration rate and decreased tubular function.[13] The above factors make reliance upon urinary acetone values highly undependable. One of our patients on admission showed only a 2 plus urine acetone while exhibiting a higher level in his plasma. Therefore, it seems logical to determine acetone concentrations not where they might have been excreted and are doing little harm, but where they are circulating and affecting homeostasis—namely, in plasma.

In diabetic acidosis, the degree of acidosis as measured by the plasma acetone test offers a better index of insulin resistance than any other chemical or clinical determinant. Larger indicated doses of insulin, therefore, can be administered early in the management of cases showing severe acidosis, with less danger of hypoglycemic reactions. Conversely, as acidosis is controlled in the later hours of management, by noting a decline in plasma acetone values, the return of insulin sensitiveness can be anticipated by the clinician. In this manner by reducing the frequency and size of insulin doses administered, or by giving adequate glucose, hypoglycemic reaction and depletion of liver glycogen can be avoided. If plasma acetone values fail to fall or even rise during the therapy, continued or increasing insulin resistance may demand a further increase in the amount of insulin administered. In experimental diabetes in animals, Soskin has noted a delayed or late decline in blood and urine ketones developing three or four days after insulin withdrawal and accompanied by fatty liver and hepatic failure.[16] The human counterpart of this observation has not been reported and was not observed in this series of cases.

SUMMARY AND CONCLUSIONS

In summary, the clinical advantages of the plasma acetone test may be listed as follows:

1. It confirms the diagnosis of diabetic acidosis by means of a simple procedure performed at the bedside in a matter of minutes.
2. At the same examination by testing serial dilutions of plasma for acetone, an estimation of the degree of acidosis and, hence, insulin resistance can be safely administered when indicated.
3. During the course of management of diabetic acidosis a decline in plasma acetone concentration denotes a return of insulin sensitiveness and, hence, decreasing insulin requirements can be anticipated. Similarly, failure of the plasma acetone level to fall or a rising concentration of acetone denotes continued resistance of the patient to insulin and larger doses of insulin must be given.
4. In an unconscious patient; it affords a rapid

means of excluding diabetic coma as a cause for unconsciousness.

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Parkinsonism Treatment

A recent study has given added evidence that the technique of chemopallidectomy does improve the symptoms of Parkinson's disease (shaking palsy). Reported in the May 3rd Journal of the American Medical Association, the study showed that persons who had undergone the operation are "for the most part in a better position" than those who had not had the operation.

In chemopallidectomy chemicals are injected into the globus pallidus, a part of the brain. When the globus pallidus is diseased, it contributes to the development of tremor and rigidity in paralysis agitans. The operation was devised in 1953 by Dr. Irving S. Cooper of New York University-Bellevue Medical Center.

Questionnaires were returned by 106 patients with paralysis agitans who had undergone neurosurgery six months to two years and four months earlier. In addition, 103 were returned by patients who had been considered for surgery but had not been operated on.

Of the group operated on, 89 per cent reported that tremor and rigidity on the side affected by the operation maintained improvement, while only 10 per cent of the control group reported improvement. Less than 5 per cent of the first group noted any worsening of symptoms, while 57 per cent of the controls reported this.

A similar but less striking trend was seen in the ability to carry out activities of daily living and housework. The number of patients who had had surgery and were working varied little from the time of surgery. About 50 per cent of them were employed. However, 28 per cent less of the non-operated group were working at the time of the study than at the time of evaluation.

Even among those who underwent chemopallidectomy but were not working, there was a feeling that they were better able to work. While this is not sufficient for employment, it certainly contributes to a feeling of self-respect and motivation which may later be used in carrying out further rehabilitation, the report said.

The report was made by Manuel Riklan, Ph.D., chief of the psychological and vocational services, St. Barnabas Hospital, New York, and Leonard Diller, Ph.D., psychological consultant of St. Barnabas Hospital and coordinator of training and research in psychology, New York University Institute of Physical Medicine and Rehabilitation.

Hypogammaglobulinemia in Children Under the Age of 12 Years

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THE CHANGES in the serum gamma globulin concentration occurring in healthy infants immediately after birth and during the first two years of life have been extensively investigated[1,2,3]. It was found that at birth the gamma globulins are slightly elevated. During the first 3 to 6 weeks the gamma globulins drop to about half the level at birth. They start to increase again at about 3 months and reach the adult level at the age of two years[4]. It has been thought[5] that the early decrease in gamma globulins is due to metabolic consumption of those present at birth combined with an initially slow formation that is insufficient to maintain the original concentrations of these proteins. The gamma globulin levels in sick children, particularly those suffering from tuberculosis or rheumatic heart disease, were found by earlier authors to be elevated[6,7], similar to the findings obtained with adults. Lubschez[2] in her study of gamma globulin values in healthy children emphasizes the precaution of collecting blood at least 4 months after an infection, since the elevation of gamma globulin effected by an infectious disease is apt to persist for a considerable length of time.

In the present investigation the serum protein patterns were studied in children up to the age of 12 years. The incentive for this study was the unexpected finding that children suffering from repeated upper respiratory infections had low gamma globulin levels. The study was extended to children with other diseases and to clinically healthy children.

MATERIAL AND METHODS

Blood was drawn either from the cubital vein or from the heel or large toe. The minimal required amount of serum was 0.2 to 0.3 ml. In each sample the total protein was determined by a modified Linderstrom-Lang specific gravity method[8]; the distribution of the serum protein fractions was determined by paper electrophoresis[9]. All estimations were carried out in duplicate. After staining the filter paper strips with bromphenol blue the shape of the distribution of the protein-bound dye was recorded with a densitometer. The quantitative analysis of the fractions was done by eluting the dye with 0.01 N. NaOH and determining the absorbency spectrophotometrically.

The sera of 320 children were studied and were divided into two groups. The first group consisted of children suffering from repeated infections, mostly of the upper respiratory system or of the ears. The

Table I
Distribution of Serum Proteins and Its Fractions
In Children Below the Age of 12 Years*

Total Protein (G/100 ml.)		Albumin (% of Total Protein)		Globulin (% of Total Protein)			
Range	No. of Cases	Range	No. of Cases	Range	$Alpha_1$ No. of Cases	$Alpha_2$ No. of Cases	Beta No. of Cases
4 –4.4	4	35	7	0–2.9	9	0	0
4.5–4.9	5	35–39	13	3–5.9	195	4	3
5.0–5.4	7	40–44	19	6–8.9	109	32	36
5.5–5.9	19	45–49	33	9–11.9	6	82	110
6.0–6.4	56	50–54	51	12–14.9	1	93	106
6.5–6.9	109	55–59	80	15–17.9	0	74	43
7.0–7.4	65	60–64	62	18–20.9	0	25	18
7.5–7.9	45	65–69	34	21–23.9	0	7	4
8.0–8.5	10	70–74	17	24+	0	3	0
		75–80	4				

*The values for gamma globulins are given in Table II.

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second group included miscellaneous pathological states such as congenital heart disease, mongolism, acute infections and also clinically well children; that is, all sera which were submitted to electrophoretic investigation for any reason other than repeated infections. Excluded were only children suffering from kidney or liver diseases, because of the well established abnormal composition of sera in these diseases.

RESULTS

The frequency distribution for the total serum protein and for the protein fractions in children under the age of 12 (Table I) differed slightly from that of adults. Since the distribution of the total serum proteins and their fractions, with the exception of gamma globulins, did not show significant differences between the group of children with repeated infections and the others, in Table I the two groups were combined. The peak of the total proteins in children were found between 6.5 and 7.0%, the peak in adults between 7.0 and 7.5%. This might be an expression of the increased water content of the tissues of children. The peak in the percentage of albumin was slightly higher and in the percentage of globulins slightly lower than in adults. The de-

Table II

Gamma Globulins in Sera of Children Suffering From Repeated Infections Compared With Children of the Same Age Group

Age	Diagnosis	Total No. of Cases	Gamma Globulins (% of Total Protein)								
			0-2.9	3-5.9	6-8.9	9-11.9	12-14.9	15-17.9	18-20.9	21-23.9	24+
0-1	Rep. Infections	69	3	15	27	15	6	2	0	1	0
	Others	18	0	1	3	8	3	2	1	0	0
1-2	Rep. Infections	40	0	9	14	9	3	5	0	0	0
	Others	16	0	1	3	7	4	0	1	0	0
2-4	Rep. Infections	26	0	4	6	7	4	2	2	0	1
	Others	14	0	0	3	2	3	2	2	1	1
4-6	Rep. Infections	22	0	2	4	7	4	2	2	0	1
	Others	10	0	0	0	1	3	3	1	1	1
6-8	Rep. Infections	21	0	1	5	6	5	0	3	0	1
	Others	18	0	0	0	0	3	8	3	2	2
8-12	Rep. Infections	32	1	1	5	13	6	4	2	0	0
	Others	34	0	0	0	8	8	7	6	2	3

Table III

Total and Differential Blood Count in Children With Repeated Infections (Gamma Globulins Below 9%)

Age	Level of Gamma Globulins (% of Total Protein)	Total Leucocytes	Differential Count				
			Polymorphonuclear	Lymphocytes	Monocytes	Eosinophils	Basophils
4 months	7.1	11.800	25	62	12	1	..
9 months	8.5	6.050	19	68	7	5	1
12 months	7.5	13.600	68	28	1	3	..
12 months	5.5	4.800	43	52	5	..	..
15 months	3.8	10.200	70	28	2	..	..
15 months	6.0	6.150	24	70	5	1	..
16 months	7.0	6.950	27	65	4	4	..
16 months	4.3	11.800	80	18	2	..	..
18 months	5.3	9.450	41	52	4	3	..
19 months	7.1	6.100	54	43	3	..	..
24 months	5.2	7.500	34	45	11	10	..
3 years	7.5	5.300	36	42	22	..	..
4 years	6.2	7.700	60	34	2	4	..
10 years	8.5	8.900	61	33	2	4	..

creased percentage of globulins was due to a great extent to the decrease in gamma globulin content. Table II and Fig. I show the distribution of gamma

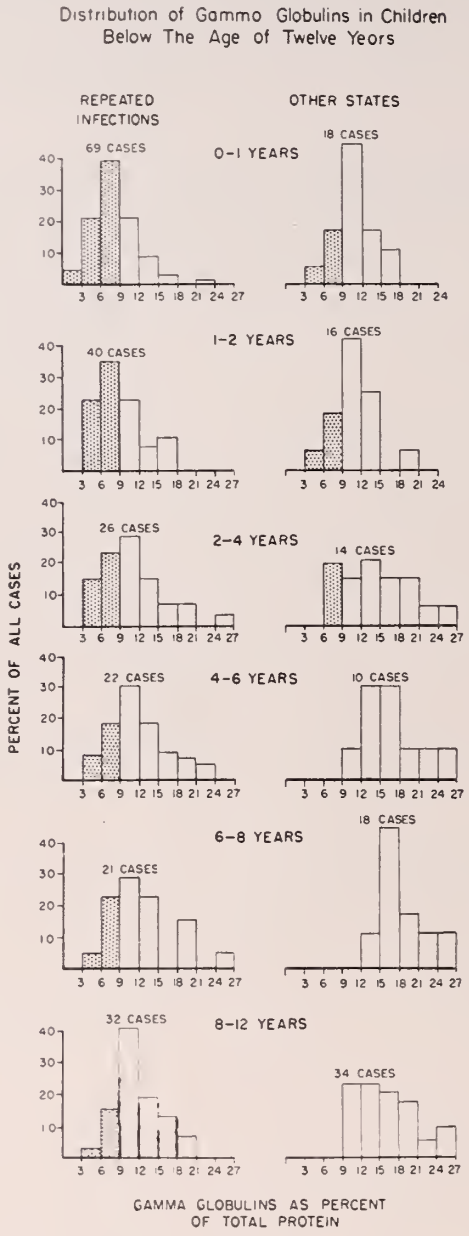


Figure 1

globulin concentration levels in sera from the 320 children. In the cases of the repeated infection group the blood was drawn during an attack. Sixty-eight out of 109 children under the age of 2 years and 28 out of 101 under the age of 12 had not reacted to the infection by an increase in gamma globulins. In two children (one boy and one girl) under the age of 2, and in one girl aged 9, total absence of gamma globulins was found. The lack of increase in gamma globulins, however, was not a general characteristic since many children with repeated infections and most of the children who were clinically healthy or had other diseases showed normal or elevated gamma globulins.

It seemed of interest to compare the changes of serum protein pattern in response to infection with the changes that occurred in the total count and differential distribution of the leukocytes. Table III shows the white cell counts in children with repeated infection having low serum gamma globulins, and Table IV in children from the same group having normal or increased serum gamma globulin levels. The number of cases investigated is not sufficient for a final conclusion, but the data show a definite tendency for leukocytosis to occur in association with high or normal serum gamma globulins and for much less of a leukocytic response to be associated with low gamma globulins. It is also interesting to observe that children with repeated infections who had low gamma globulins and low leukocyte counts usually had eosinophils in the differential count.

A number of the children who did not respond with an increase of gamma globulin to repeated infections were treated with monthly injections of 3-5 ml. of gamma globulins. The changes in the serum gamma globulins were followed in 35 cases. The clinical improvement in all the treated children was very satisfactory and it will be reported in detail at a later date by the clinicians who cared for the patients. The clinical improvement was not accompanied in most cases with a corresponding increase in the serum gamma globulins which remained low for many months.

DISCUSSION

The finding that 68 out of 109 children under the age of 2 years and 28 out of 101 under the age of 12 did not react to repeated attacks of infections with an increase of gamma globulins was unexpected. This lack of increase in gamma globulin seems to indicate a decrease in immunological responsiveness; this assumption is somewhat strengthened by the lack of leukocytosis in many of these children. It seems reasonable to assume that in most of these cases the physiological period of low gamma globulin formation is extended and that most children outgrow this anomaly, since between the ages of 2 and 12 years only 28 of 101 children show it. Low gamma globulins in adults in our material as well as in that of other laboratories is a rare finding.

SUMMARY

In a series of 210 children suffering from repeated infections, 68 (or 62 per cent) below the age of 2 years and 28 (28 per cent) between the ages of 2 and 12 years had not reacted to repeated infections with an increase of serum gamma globulins. It is suggested that these children were in a state of decreased immunological reactivity. In 3 children, having repeated infections, the serum gamma globulin fraction was completely absent.

Out of 110 children in comparable age groups who were well or had various clinical complaints but not repeated infections, 24 per cent under the age of 2 years and 3 per cent under the age of 12 showed low gamma globulins.

Leukocytosis in response to repeated infections was more prominent in children with normal gamma globulin levels.

A group of children, not showing increased serum gamma globulins in response to repeated infections, showed marked clinical improvement on parenteral administration of gamma globulin.

Acknowledgment

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Table IV

Total and Differential Blood Count in Children With Repeated Infections
(Gamma Globulins Above 9%)

Age	Level of Gamma Globulins (% of Total Protein)	Total Leucocytes	Differential Count				
			Polymorphonuclear	Lymphocytes	Monocytes	Eosinophils	Basophils
2 months	12.3	7.900	22	61	13	4	..
8 months	10.5	14.400	40	60	..	..	..
12 months	14.3	18.400	47	49	2	2	..
13 months	16.4	6.350	57	36	2	5	..
24 months	14.3	23.000	90	10	..	..	..
27 months	12.7	9.500	15	84	1	..	..
5 years	15.5	9.150	..	..	..	..	..
5 years	9.9	12.500	83	14	3	..	..
5 years	9.8	20.200	75	24	..	1	..
6 years	11.4	15.600	72	25	1	2	..
6 years	17.4	12.700	48	46	4	2	..
7 years	12.8	20.000	82	14	..	2	2
7 years	13.6	9.960	54	44	1	1	..
7 years	11.8	12.200	46	46	7	..	1

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Hypothyroidism without Myxedema

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THESE OBSERVATIONS apply only to adult hypothyroidism. It is well known that there is controversy concerning the existence of hypothyroidism without myxedema. Williams[7] in his latest text fails to consider such an entity, but many clinicians feel that there are varying degrees of thyroid hypofunction, and many seeming differences of opinion become reconciled when the descriptive terms used are correctly defined.

Myxedema is defined as "a disease of nutrition due to lack of thyroid secretion and characterized by hard edema of the subcutaneous tissues, dryness of the hair, dullness and lethargy".[1] Werner states that "in advanced hypothyroidism there is often myxedema", thus clearly implying that milder degrees should be considered a clinical entity.[2] The failure to emphasize this has led to the present state of ineptness in recognizing adult, or so-called "masked" hypothyroidism.

Means found the incidence of myxedema to be from 0.03% to 0.08% of admissions to large hospitals.[3] The disease occurs four times as frequently in females as in males, and the age group most affected is that from 30 to 60 years. This disease is not usually treated in hospitals, and Starr has estimated that for every patient with full-blown myxedema there are 100 patients with milder forms of hypothyroidism.[4] Jackson stated recently that hypothyroidism was the most commonly encountered disorder in his goiter belt community.[8] We probably will not find this prevalence obtaining in Virginia, but even in non-goitrous areas, the disorder is frequent and frequently overlooked.

In this review etiology will not be considered, for the symptoms are always due to a lack of sufficient circulating thyroid hormone. It is very doubtful that there are patients with tissues refractory to thyroid hormone.

In that the incidence of true myxedema is low, our index of suspicion for hypothyroidism is also low. Figure 1 shows the gross features of myxedema. The disease followed thyroiditis, and this patient had remained untreated for 15 years mainly because she did not consider herself to be sick. After she had been started on thyroid therapy, she felt remarkably improved, and only then did she realize that she had been ill for those many years.



Figure I

The myxedematous patient did not complain. In striking contrast, the patient with occult hypothyroidism goes to the doctor frequently, and gives a veritable organ recital of symptoms. So much do they complain of seemingly unrelated symptoms that they are often quickly labelled as neurotic, and given various placebos, nerve tonics, vitamins and other nostrums which might be handy. An explanation is apparent when one considers the cause of symptoms. Metabolic activity of tissue is dependent to some degree on circulating thyroid hormone, which if insufficient will give rise to impaired function of all organ systems. Obviously, then, the patient has complaints related to multiple systems, and it is difficult for the patient to give an accurate description of his symptoms. Lerman[5] in reviewing the symptoms of myxedema found intolerance to cold, dryness of the skin, and weakness in almost every patient. As the severity of the disease progressed, mental confusion, constipation, dyspnea, thick tongue, hoarse voice, and puffy tissues became apparent.

Presented at the annual meeting of The Medical Society of Virginia, Washington, D. C., October 27-30, 1957.

In order to raise our index of suspicion for "masked" hypothyroidism Starr[6] lists the following symptoms:

1. Growth failure (not to be considered in adults)
2. Menstrual disorders (both monorrhagia and hypomenorrhea)
3. Infertility—habitual abortion
4. Delayed puberty (again not relevant to adults)
5. Mastalgia and cystadenosis of the breasts
6. *Some* cases of obesity
7. Gastrointestinal symptoms including such diverse disorders as peptic ulcer, hypochlorhydria and constipation
8. Chronic fatigue, anorexia, *leanness* and neurasthenia
9. Some cases of anemia
10. Dry skin, alopecia
11. Allergic syndromes, especially chronic rhinitis

Note that obesity was not mentioned by Lerman, and that Starr includes leanness as well.

The following signs and symptoms are ones which are often not mentioned in the standard texts, but in actual practice have been found to suggest the possibility of hypothyroidism.

1. "Nervousness"
2. Paresthesias—especially feeling of numbness in arms, hands and feet—hands and feet "going to sleep"
3. Intolerance to cold—patient complaint being "poor circulation"
4. Supraclavicular fat pad
5. Loss of lateral eyebrows
6. Hair changes—increased dryness, coarseness—"unruly" hair
7. Nail changes—usually pitting

Although "nervousness" has been placed at the top of the list, this is not to imply that hypothyroidism is the most frequent cause of emotional disturbances, but to emphasize that patients with diminished thyroid function are often easily disturbed, tense, and not at all lethargic as is the patient with actual myxedema. The paresthesias are quite common, and a patient who complains of the extremities "falling asleep", or having a "numb tingling" may give as his presenting complaint "poor circulation". This is often the patient's interpretation of cold intolerance, so that the physician must delve further to establish the true nature of the complaint rather than simply being in agreement with the patient's interpretation. Less frequently encountered are increased bulk of fat in the supraclavicular areas, thinning out of the lateral eyebrows, and pitting of the nails. A woman will often note that her hair "doesn't hold a wave", or doesn't grow as rapidly as it should. Today we have difficulty in evaluating hair texture due to the routine use of so many sprays, lotions, and other materials to the hair.

There is no "typical case report", but the following summaries will review some of the symptoms. The first patient was seen at age 41 years. She had been tense and nervous for some years, and had been told that she was having an "early menopause". Her periods had been irregular but with normal flow. She complained of tightness in the chest, general tension, crying with the least situational upset, soreness of the breasts, and fatigue with minimal exertion. On further questioning it was found that she wore a sweater while teaching piano to students who complained bitterly about the room being overheated. Previous treatment had consisted usually of sedatives or vitamin injections. Physical examination was unrevealing except for cystic changes in the breasts and hair that was suggestively dry. She wept during the interview. When started on thyroid there was dramatic improvement. The cold intolerance, crying spells, and general tension completely disappeared. Her periods became regular and have remained so for one year. This demonstrates the long unrecognized patient with symptoms so varied that she was diagnosed as a psychoneurotic.

A second patient, a 52 year old nurse, had been started on thyroid at the age of 41 because of irregular menses and fatigue. She had been nervous most of her life but never had undue difficulty adjusting both professionally and socially. Flushes began in 1954, and in 1955 menses stopped. She continued to have some flushing but was not too uncomfortable. In April, 1956, she discontinued thyroid since she saw no reason to continue this when her periods had stopped. From that time she became increasingly irritable and tense. The flushes became more severe, and she would become drenched with perspiration, especially at night. She began to have cramps in the legs at night, became quite easily fatigued, and lost some weight because of poor appetite. She started having episodes during which she felt that something disastrous was about to happen, and this feeling was accompanied by tachycardia and palpitation. She would feel her extremities become cold, and felt that her veins were becoming swollen with stagnant blood so that she feared

an impending stroke. She had taken sedatives and injections of vitamin B_{12} with only slight relief. Physical examination was within normal limits. She was noticeably hyperactive, and refused a BMR or other studies because she was too nervous to go through the tests. When a trial of tri-iodothyronine was instituted the paresthesias disappeared within three days. The night cramps, flushes, and sweats subsided, and she no longer had the feelings of impending disaster. She began to eat better and subsequently gained 10 pounds.

This patient demonstrates that hypothyroidism does not preclude excessive perspiration. The episodes of tachycardia demonstrate that bradycardia is not necessarily associated with hypothyroidism. Also, she gained weight when properly treated with thyroid, yet most fat people still believe that "low thyroid" is causing their obesity.

Many more cases could be presented to show that seemingly unrelated symptoms were all part of an underlying deficiency of thyroid function. It is easy to see why the term "masked hypothyroidism" has been coined, for if the physician expects to find lethargy, bradycardia, and absence of sweating in hypothyroidism, such symptoms as this patient had will actually mask the true nature of the disorder.

To detect these hypothyroid patients who do not present the classical picture of myxedema, our awareness of the protean manifestations of this disease must be increased. Once the diagnosis is considered, there are several ways to confirm it. No one test can be considered a reliable guide in every instance, and the results of any test must be evaluated with regard to the clinical status and symptomatology of the patient.

The BMR is still the most readily available, and when done correctly, a very valuable test. However, many patients cannot relax, so that the test is never really basal for them. Serial determinations will often show decreasing values as the patient learns to relax and better cooperate. One method to correct for lack of relaxation is to produce light sleep with a short acting barbiturate, and apply a correction factor of approximately 20% to compensate for the somnulent state. Also, if the calculations are performed using an ideal rather than true body weight, reliability will be increased by correcting for the low oxygen consumption of fat.

Cholesterol values are of little help in the original diagnosis, for they are usually elevated significantly only when clinically recognizable myxedema is present. They are more valuable when taken serially following institution or cessation of thyroid.

Serum protein bound iodine values are an accurate reflection of the quantity of circulating thyroxine, but at present the number of laboratories which can give us reproducible results is small. The test itself is quite difficult technically, and the presence of even minute amounts of iodine in the air, as in most hospital and general laboratories, give a marked error to the determination. The values obtained in normal subjects are from 4 to 8 micrograms, with some investigators considering 3.5 micrograms as the lower normal value. The prior administration of iodine containing medications or contrast media nullifies the value of the test in the individual being studied. Unless the physician is sure of the laboratory accuracy and the previous medications used by the patient, the results obtained may be just as misleading as helpful.

The measurement of radio-active iodine uptake is of little value, due to over-lapping of the normal and hypothyroid values. Some authors report normal uptake of I 131 in 50% of hypothyroid patients.[11] The uptake indicates the presence, but not necessarily the functional capacity, of thyroid tissue.[10]

More recently there has been devised a simple method[9] of skin biopsy with staining techniques which show the mucinous deposition characteristic of thyroid insufficiency. This is not at present quantitative, and cannot be considered available for general use.

An easy and accurate method to confirm thyroid insufficiency is to utilize a therapeutic trial of thyroid substance in a dosage of 60 to 90 milligrams daily. One can't simply sit back complacently while the patient takes the medication. Careful observation must be maintained to exclude any placebo effect. If there is a characteristic response with disappearance of the disturbing symptoms, the diagnosis is likely. If there is doubt as to the response, the thyroid can be withdrawn after 4 to 6 weeks, thus producing a hypothyroid state due to suppression by the exogenous thyroid. In the previous euthyroid individual there will be a return to the euthyroid state within 2 to 4 weeks. A previously hypothyroid patient will usually become more noticeably hypothyroid and remain so. It is here that serial cholesterol determinations are valuable objective criteria, there being a significant fall in the hypothyroid person started on thyroid, and a significant rise on cessation. The euthyroid person given thyroid will show no significant drop in cholesterol content of

the serum, and any rise occurring after stopping thyroid is of short duration.

Of timely interest is the following excerpt from a question and answer column concerning thyroid function tests: "The diagnosis of thyroid function is made primarily on the clinical appraisal of the patient's history and physical findings. Laboratory tests by no means supplant clinical judgment, but merely tend to support it".[12]

Treatment of hypothyroidism is well known and consists simply of using any potent thyroid preparation. The dosage range will be from 60 to 180 milligrams for a good response. Tri-iodothyronine is more rapid in response and shortens the time needed for a therapeutic trial. It offers no advantage in maintenance therapy.

In summary, clinical hypothyroidism often exists without myxedema. This is quite often "masked", but if one applies certain investigative principles this mask can be lifted with prompt, inexpensive, and effective relief for many persons suffering from longstanding, unrecognized, annoying and often disabling disease.

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Polio Vaccine and Brain Damage

Suspicions that Salk polio vaccinations might cause damage to the brain or central nervous system are unfounded. This observation was made following an extended clinical study of 852 persons in all age groups who received three inoculations with the vaccine. The study was prompted by reports which were circulated during the 1956 mass inoculation program to the effect that children were developing convulsions and other signs of central nervous system disorders after being vaccinated.

Mrs. Erna L. Gibbs and Dr. Frederic A. Gibbs termed the outcome of the study "astonishing." "We had not expected to obtain such completely negative results with a biologically potent material."

Writing in the June 21st Journal of the American Medical Association, they said it was their intention to determine if a mass immunization program against poliomyelitis could cause brain disorders in some persons.

Sudden, unexplained illnesses, some of which defy the most expert diagnosticians, are common in many children. "By coincidence," "an unexplained illness could follow a Salk vaccination at just the right time to convince the family and even the physician in charge that the vaccination was responsible for the child's illness or even his death."

If the brain suffered abnormalities as a result of a Salk inoculation, it would be indicated by the presence of encephalitis, an inflammation of the brain. This condition occurs on extremely rare occasions following vaccination against disorders such as whooping cough, rabies, diphtheria, and tetanus.

In the study, electroencephalographic tests were given to each of the 852 patients before and after the three Salk inoculations. Since no abnormalities were uncovered, the researchers concluded that "Salk vaccine is unlikely to cause an encephalitic type of reaction or brain injury."

The study was carried out in three centers—Chicago, Rockford, Ill., and Richmond, Va.—in order that local conditions might not affect the results.

The Use of Pacatal in the Management of Geriatric Patients

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NERVOUS, agitated elderly patients living at home are often a disrupting influence on the entire household. Many of these elderly ones, because of unproductive time on their hands, are irascible, bickering or constantly complaining. When they are ill—though the illness may be a minor one—their continued, exasperating demands for attention are blown up far beyond usual expectations. To a large extent, this senile mental health problem is disconcerting to the physician and a burden to the family.

Since the development of tranquilizing agents, such acutely and chronically agitated hospitalized patients have been given a new lease on life. Many of them, senile or otherwise, have been permitted freedom of the grounds or are even allowed to go home on visits.

These successes with the hospitalized mentally ill led us to consider using Pacatal*, one of the newer phenothiazines, as a calming agent in nervous, tense and agitated patients who were not hospitalized but living at home with their families.

Our reasoning was based on both clinical and pharmacological reports. Bowes[1] found "Pacatal was most effective in the symptomatic treatment of aggression, destructiveness, restlessness and insomnia." His single patients, particularly the "disgruntled and irascible," were made "much more pleasant and cooperative." Moreover, he found it to have a "slightly euphoriant effect" which to our way of thinking could be extremely useful in our unhappy patients. Feldman[2] also noted this ". . . pleasant subjective feeling produced by Pacatal." Flipse[3] stated that "Pacatal has proven highly valuable in the management of office patients suffering from emotional tension, anxiety neurosis, senile arteriosclerosis and schizophrenic reactions."

Pharmacologically, Pacatal demonstrates a selective regulating action on the central nervous system without inhibiting the cortical centers, producing tranquility without hypnosis. It has a potentiating effect upon sedative-hypnotics and analgesics as well as on local anesthetics such as procaine, etc. The sympathetic and parasympathetic systems both of which are involved in emotional behavior, are similarly inhibited by the drug. It exhibits a vasodilator effect on the coronary vessels of the isolated guinea pig heart and a spasmolytic effect upon induced coronary spasm in the rat, this effect being stronger than papaverine[4]. In experimental heart surgery, Pacatal prevented fibrillation and Gadermann and Donat described its effect as "intra-vasal anesthesia"[5].

Since Pacatal has prevented fibrillation experimentally and also possesses a vasodilating action, it was felt that these additional cardiovascular properties would make the drug even of more particular value in the elderly patient.

CLINICAL DATA AND RESULTS

A total of 83 elderly patients were evaluated. The dosage administered to all patients was 25 mg. of Pacatal three times a day and at bedtime for a period of two weeks to a month. The gamut of conditions studied encompassed most of the usual organic illnesses seen in this age group and were attended with anxiety, tension and behavior changes such as irritability, withdrawal, less interest in personal appearance, neglect of health or excessive preoccupation with physical symptoms. In some instances it was difficult to "reach" the patient.

The following table summarizes the results we achieved in the control of the psychological manifestations with Pacatal in the small dosages employed:

TABLE I

TRANQUILIZING EFFECT OF PACATAL IN PATIENTS AGE GROUP 50-82

Primary Diagnosis	Number of Patients	Improved	Not Improved
Anxiety State	27	25	2
Agitated Senile	11	9	2
Generalized Arteriosclerosis	26	22	4
Arterial Sclerotic Heart Disease	19	16	3
Total	83	72	11

* Pacatal used in this study was supplied by Warner-Chilcott Laboratories, Morris Plains, New Jersey.

Improvement in the psychic manifestations was noted in 86% of cases. Pacatal helped the patients to react emotionally in a more normal pattern. They became more responsive to therapeutic measures. Furthermore, subjectively they felt better, accepting their adversity more cheerfully. In no instance had the drug an adverse effect on the underlying pathology. The only side effect encountered was dryness of the mouth, which occurred in 10% of the patients.

Despite the general debility and the extreme illness of some patients, no severe side effects developed. Apparently, small doses of Pacatal are tolerated well without inducing any of the severe side reactions mentioned in the literature when high dosages were employed.

From the results of our study, Pacatal is relatively safe to use when administered in small doses. Complicating organic diseases so frequently found in the older age group do not seem to be a contraindication for its use. In our opinion, the normalizing effect of Pacatal can help successfully treat non-hospitalized, tense, anxious or agitated senile patients who cannot be controlled on sedatives. The following are representative case histories:

Case I: This 56 year old white male was first seen at home complaining of severe cough with blood tinged sputum, high persistent fever and difficulty in breathing. A diagnosis of pneumonia was made and the patient received appropriate therapy. Although his dyspnea and fever continued and his symptoms became worse he consistently refused hospitalization. In addition to these symptoms he developed a considerable psychoneurotic anxiety and although visited at home twice daily and persistently urged to enter the hospital he continued to refuse. When placed on Pacatal the patient became much more cooperative and within 24 hours accepted the physician's recommendation of becoming hospitalized. Further course was uneventful.

Case II: This 80 year old white female had been treated at home for a considerable time for arteriosclerotic heart disease and congestive failure. She was constantly irritable, unhappy and usually bemoaning her situation in life. Her husband and all other relatives had expired except her daughter and son-in-law with whom she lived. Although her cardiac condition appeared to be under good control, she too had an anxiety overlay manifested by constant complaining and hypochondriasis which led to a most difficult home environment for the daughter and son-in-law. Forty-eight hours after being started on Pacatal there was prompt alleviation of this complaint. She became much more congenial and accepted her position in life and her general home environment. Although there was no change in her cardiac status, she faced life realistically and was actually cheerful on certain occasions.

Case III: This 65 year old white female presented a typical picture of hypochondriasis. She had subjective complaints involving her entire body. Numerous intensive investigational studies had revealed nothing. She was studied by various physicians at various institutions and no pathology disclosed. After receiving Pacatal 25 mg. t.i.d. the basic difficulty was found to be a poor daughter-in-law relationship. Following this there was prompt amelioration of all symptoms and satisfactory acceptance of living with her son and daughter-in-law. Continued observation still reveals no observable illness.

SUMMARY

Eighty-three non-hospitalized patients suffering from various functional disorders accompanied by agitation, anxiety and tension were studied on low dosages of Pacatal.

Adequate control of the psychological manifestations was achieved in 86% of cases.

Dry mouth was the only side effect encountered which occurred in 10% of the patients.

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Felty's Syndrome

Report of a Case Responding Favorably to Splenectomy

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IN 1924 Felty[2] described in the Bulletin of the Johns Hopkins Hospital a combination of symptoms which included chronic infectious arthritis, leukopenia, and splenomegaly. In 1932 Hanrahan[5] reported the first hematologic remission in a patient with Felty's Syndrome following splenectomy. To date 66 cases splenectomized for this disorder have been reported and in 51 (or 77%) of these the leukopenia appears to have been relieved. The case we report thus represents, as nearly as we can ascertain, the 67th patient subjected to operation, and the 52nd who showed a favorable response to removal of the spleen.



Fig. 1—This section shows the prominent sinusoids with littoral cell proliferation often seen in the spleen of Felty's syndrome. Hematoxylin and eosin. Print is 100x.

REPORT OF A CASE

N. S. (W. M. H. #136545), a 44 year old, unmarried white female, had suffered from a progressive and crippling type of rheumatoid arthritis involving the distal joints of all four extremities since the age of 18 years. She was first studied in the Winchester Memorial Hospital in August 1955, at which time white blood cell determinations of 1550 and 1100 cells/ c.mm. were demonstrated with differential ratios of segmented to non-segmented forms of 35/65. The spleen was palpable and felt to be moderately enlarged. Cholecystography demonstrated the presence of multiple stones in a normally functioning gallbladder.

She was readmitted on October 9, 1955. Preoperative blood studies were essentially unchanged, and in addition to leukopenia, a mild degree of microcytic anemia and a platelet level of 188,160 platelets/c.mm. were reported (Table 1). On October 13, 1955 the patient was explored under endotracheal anesthesia through a transverse upper abdominal incision which completely transected both rectus abdominis muscles. Cholecystectomy, splenectomy, the resection of a small accessory spleen, and

TABLE 1

RESPONSE OF BLOOD ELEMENTS TO SPLENECTOMY 10-11-55

	Oct. 11, 1955 (Preop. 48 hrs.)	Oct. 13, 1955 (Postop. 5 hrs.)	Dec. 30, 1957 (Postop. 24 Mos.)
RBC	3,360,000	3,500,000	3,950,000
PLATELETS	188,160	297,500	461,010
WBC	1,100	4,650	5,550
Seg. Neut./Lymph	37/63	82/18	57/43

From The Winchester Surgical Clinic and The Winchester Memorial Hospital, Winchester, Virginia.

incidental appendectomy were performed without difficulty. Convalescence was uneventful and the patient was discharged to her home on October 19, 1955, the sixth postoperative day.

The weight of the resected spleen was 360 grams, its size being approximately 2½ times that of normal. Microscopic section (Figure 1) revealed prominent germ centers and sinusoids, and was considered by the pathologists to be compatible with the type of hypersplenism associated with Felty's Syndrome.

The patient's hematologic response was dramatic as indicated by Table 1. Five hours after operation the leukocyte count had risen to 4,650, with 82% of the cells segmented forms. A corresponding rise was noted in the level of the platelets, and both changes were maintained on daily determinations during her hospital stay. At 26 months following operation blood studies revealed normal leukocyte and platelet levels, and a definite improvement in respect to the preoperative anemia.

An interesting, and probably significant additional observation is that marked improvement in the status of the patient's rheumatic disorder followed the operation. Except for considerable residual deformity of a permanent nature, her joints have remained entirely quiescent, she has gained 12 lbs. in weight and is in a reasonably good general state of health.

DISCUSSION

Theories have been expounded to account for both phases of improvement which have been noted in this patient:

1. *The effect of splenectomy upon the peripheral blood.* In 1939 Wiseman and Doan[7] explained the cytopenia associated with various forms of hypersplenism as resulting from excessive phagocytosis of the several formed blood elements by the spleen itself.

Dameshek and Estren[1] on the other hand have maintained that the spleen exhibits a normal inhibitory effect, probably humoral in nature, upon the bone marrow, and that this effect becomes increased when splenomegaly occurs. In support of the Damoshek theory, Steinberg[6] notes a hyperplastic type bone marrow in cases of Felty's Syndrome, and feels that the spleen acts in some way as a barrier between overactive bone marrow and the cytopenic peripheral blood.

Cortisone, which is known to exert a favorable effect in some types of hypersplenism, proved to be without benefit in two recently reported cases[3,4] of Felty's Syndrome, although it is of interest that both patients subsequently responded nicely to splenectomy.

2. *The effect of splenectomy upon the rheumatic process.* Improvement in the joint manifestations of the disorder has also been noted throughout the literature and appears to have been a feature of our case. Steinberg[6] refers to six cases demonstrating this type of improvement, and cites both human and experimental evidence to account for its occurrence. The anterior lobe of the pituitary has been shown to undergo decided hypertrophy following splenectomy, and, conversely, splenic atrophy is known to occur in the experimental animal after hypophysectomy. One then infers a sequence of clinical events which include splenectomy, then hypophoseal hypertrophy, and finally a constant increase in the supply of endogenous adrenocorticotrophic hormone resulting in relief of rheumatic symptoms. The results would appear to be less constant, however, in the relief of rheumatic symptoms than in the correction of leukopenia.

CONCLUSIONS

1. A case is reported in which splenectomy produced correction of the blood deficiency, and improvement in the rheumatic manifestations of so-called Felty's Syndrome.

2. This case represents the 67th patient reported as having been splenectomized for this syndrome, and the 52nd in which the operation provided worthwhile relief.

3. A clear indication for splenectomy would seem to exist in all patients with this disorder.

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Visiting the Sick

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TWO YEARS AGO I took my wife to Europe. It was a happy time, one spent in the re-creation of history and the appreciation of art.

Next year I took her to the hospital where the entire summer was spent. Massive surgery, constant medical supervision, all and everything done to restore health. One was a thing to remember, the other a thing to forget, but the cost was about the same.

One would think that after being a doctor for over fifty years there was nothing new to be learned in a hospital. But become one of those who stands and waits, who wants answers he knows cannot be given, who wants to talk, but knows that talking is only repetition. Slowly there comes on an old forgotten fear, the tenseness of the little child in the dark. You become grateful there is such a thing as a hospital and, being the kind of man you are, you begin to analyze what is going on and the things you see; the facts, the techniques, and their inner meanings.

A hospital is easy to define, but what is hospitalization? It certainly means many things to many men and there are many viewpoints. To a surgeon it means a place where everything is subordinated to the ideal of perfection of technique. If there be defect, it must be a defect of knowledge and not a defect of effort.

To the internist it is a place for the better management of the ill and where there is no waiting to combat an emergency. Every dermatologist knows that hospitalization is a factor in healing that is an entity in itself.

In other words a patient will receive a benefit from the hospital other than that which is the reward of the same procedures if done at home.

In 1903, Radcliffe Crocker, the greatest English dermatologist of his time, delivered a series of lectures before the Medical Society of London entitled "The conditions which modify the characters of inflammations of the skin and their influence in treatment." In one of these he said, "The importance and value of putting patients in bed, who have an extensive dermatitis, was borne in upon me very early in my career. Wishing to observe the influence of certain drugs in different inflammation of the skin I took the patients into the hospital and gave them no active medication until the influence of transference from their home to the hospital had been eliminated and I found to my surprise that in many cases the improvement was so great that no trial of the drug could take place. The case of a postman with a general erythematous eruption which had been present for several months without improvement made a strong impression on my mind. I put him in bed without any other treatment and in three days the eruption had disappeared and did not recur." All this was long ago and what happened was probably due to environmental change, so important to the allergist, or a sense of security which is a psychosomatic factor, but whatever it is, because it is a power factor for good it is something to be exaggerated and not modified or suppressed.

Now the layman is in opposition to all this. He thinks of a hospital as a part of misfortune, an unhappy place, and feels it a duty to combat it with attentions which, he feels, ameliorate the rigors of hospital existence. The common pattern of this effort is to send flowers and to visit the sick when allowed.

As to flowers, after seeing the room of a popular person, one wonders why an accepted form of therapy would not be to go to bed in a florist's shop; for that is what the room looks like. Flowers are a harmless nicety, which may boost the ego of the sick, but from any standard of the artistic, it is 90% overdone.

Visiting the sick is not a harmless thing. It has many implications and deserves constructive thinking. The increasing cost of hospitalization is such a burden, anything which may lengthen it as much as a day becomes a matter of civic importance.

Mr. Carter Walker of Woodberry Forest, the greatest head-master I have ever known once said to a father when he took his twelve year old son to enter him in this school. "I would like to give you some advice. Your son is here to start a new life. You will want to see him, but that will be for your benefit. It will be harmful to him. If you could survey the marks of these new boys, you would find the poorest marks are there in the week after a visit from the parents. Stay away for a while and let us do our work. Later on there will be no problem."

Certainly the psychology of the new boy in school and the new patient in the hospital have much in common.

The attitude of the family about the hospital always makes me think of a sea voyage and the help that comes from it. The help comes from a different world, and the sea is a wonderfully different world. The beauty of the sunrise; the spray on your face; the cutting spin drift when a gale is blowing; the tossing which makes eating and dressing difficult. Damp clothes and clean air and the glory of the biggest thing in the world—The Sea. So big that man's little thoughts are dwarfed. It is almost impossible to be an introvert while at sea. But what does man do? He builds a ship so large there is little motion. The decks are closed in so they can be heated, and cold air and spray cannot reach you. So fast the trip is almost an interlude. It is in fact a closed in hotel with entertainments of concerts, movies, cocktail parties, games, and over-feeding. Everything is done to get as far away from the sea as possible. As a health measure the Susan Constant or the Mayflower was a better ship than the Ile de France or the United States.

Visiting is hard on any sick person unless the visitor is so close there is no embarrassment in any natural thing. Visiting is harder on an adolescent than an adult, and is hardest on a child. Take a small boy from the country; in a week or a little longer he becomes adjusted to hospital routine and on Sunday a car-load of the family comes in to see him. The lad does not know he is happier in the hospital. In his mind he is comparing the hospital where he is sick to the home where he once was well. When the family leaves he is home-sick and readjustment has to start all over again.

Then there is the quasi-professional visitor of the sick. He is that individual who feels he has a mission to spread light and gladness in the halls of suffering. He doesn't know he is the one who receives benefit from what he is doing, and is more in the way than a contributor to the welfare of the situation.

Just what can be done about it? It all arises from a kind intent and in the year 283 A.D. the Emperor Marcus Arelius announced as a principle of Roman Law. "The intent of the act is the body of the act."

It would be unthinkable to keep a mother away from a sick child and to repress this semi-pro would be like slapping a child in the face. The active trouble seems to be in the switching of authorities.

The sign on the door "No visitors" is a terse and positive medical direction originating with the attending physician. It is obeyed without question. But with no such sign, the problem is one of personal relations management of the hospital and this is to maintain cordial relations with a group of people who are well and do not need the actual facilities of a hospital.

A hospital is so complex that the problem of visiting is a variable one. Obviously, there is a different pattern for the single bed room, the multiple bed room and the ward. In a two bed room for example, there can be a convalescent and not six feet away an acutely ill individual. It is now visiting hours but the necessities in this room are not equal and the privileges are not the same, and yet a sliding sheet is all that separates them.

There is need for wisdom here and this wisdom cannot be expected from the harried girl at the telephone, or a probationer nurse who happens to be on duty. I personally think there should be on every floor, or somewhere in the building, a supervisor to whom every visitor should report. The details of this is a question of management but the benefit of those for whom the hospital is built demands that no outsider should have the privilege of entering a hospital door and going directly to the room, particularly of multiple facilities, because of their convenience and because it is now the time allotted for visiting.

The suffering so much want peace and quietness is a part of peace. In our hospitals quiet is requested by signs and precept but I have often wondered, if a visitor from outer space could view some of our hospitals during the visiting hours of a holiday season—whether he could make the distinction between a hospital and a bus terminal.

It would only be fair to clean our own skirts as a beginning. Decibel measurements of noise could easily be done on those hours where the public is excluded and with the same measurements during visiting hours the proof would not be a matter of opinion.

My trouble is, I do not know how important what I am saying really is, compared to the other problems of hospital management, *but this I do know.*

I know that were it not for a hospital and men sitting in this audience I would not be an eager physician tonight but simply a lonely old man.

I further know that God does not "Work His wonders to perform" in a static way; that those things to which we have grown, which are worth while, have to be fought for to maintain, and this

will include, "Life, Liberty, The Pursuit of Happiness" *and* Hospitals.

I know hospitals are only for the healing of the sick. If due to the pressure of the unthinking well, the pattern which helps the sick is being deteriorated, then something ought to be done about it.

Discussion by Dr. Williams:

Dr. Murrell has introduced three considerations in the operation of a hospital. They include kindness, sympathy, interest, and fear.

TALKING TO PATIENTS

Patients and their families are anxious people. They do not want to be treated as pieces of liver in a test tube nor Exhibit A in a museum. Successful dealings with them come to some people through the genes and can be compared with "style" in writing. Just as "style" distinguishes some writers from others, so this factor, born in some people, is not found in others. It is difficult to acquire by study, though it can be cultivated to a satisfactory degree.

Five qualities seem desirable in hospital personnel:

1. As Socrates put it, "Know thyself", in order to understand people better.
2. Never convey the impression of hurry or worry.
3. Use as much discretion in what is left unsaid as in what is said.
4. The method of talking should be friendly, and direct.
5. Strive to leave every listener pleased with your conversation.

Add to these all of the other things that should be done under the Golden Rule and you have a psychological supplement that makes patients look upon their hospital stay with faith in mankind.

COSTS

To misquote Omar Khayyam—A loaf of bread plus a jug of wine was free. Now "bread alone" costs twenty cents. With everything else soaring in price it doesn't require higher mathematics to see why hospital charges have advanced. Blue Cross contracts were devised as a depression measure to help people live through a financial catastrophe due to illness. Soon thereafter private enterprise insurance entered the field. The reason Blue Cross is popular, particularly with working people who do not object to a double room, is because they leave the hospital with little or no balance to pay. Those who insist on private quarters have by choice elected to pay the difference.

Another factor in hospital costs is due to the forty-hour week which in reality is less than two hospital days. Even hard headed businessmen who complain about the cost of nursing could easily be chagrined were they asked what they pay their secretaries for a thirty-seven and a half hour week.

Few people realize that with the building of needed hospitals and the resulting shift of patients the increase in cost per day for established hospital is double the decrease in patient days. In other words, a drop of only five per cent in patient days means an increase of ten per cent in hospital cost. This, hospitals cannot absorb; hence it is passed on to the public in the form of contract costs, insurance premiums or direct billing.

VISITORS AND FLOWERS

Another feature of Dr. Murrell's remarks pertains to hospital visitors and flowers.

A man's family is his most cherished possession. Certainly he has every right to see them as often and for as long as his presence does not interfere with their recovery. Hospitals try to operate with only such rules as good housekeeping and patients' care permit.

After all is said it remains that the doctor in charge of a patient is the one person who can give the most informative answers to questions from patients, families and friends. Regardless of his efforts lay people find it hard to comprehend all that he says so they appeal to nurses who do the best they can with what they've got. Whether extra pacifiers would quiet them or add something new to grit their teeth on is the crux of Dr. Murrell's paper.

As to flowers, they do add cheer to a room and make patients know they are not forgotten. While some speak of the amount of their cost, it must not be forgotten that if any expensive jar of fragrant ointment has been sold for money as suggested by Judas —Mary, the sister of Lazarus, would not have had the consolation of anointing the Master's feet.

The Doctor as a Citizen

H. C. BATES, Jr., M.D.
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TO YOU who have chosen Medicine as your life's work, I should like to say, "Welcome". There are few, if any, other fields of endeavor that would reward you with the satisfaction you will get from this profession. There are also few, if any, other fields that would demand more of your time, energy, ingenuity, and mental calisthenics than would medicine. Medicine is probably the most inexact science we have, the exception to the rule being the rule. Yet it is one of the most exacting of all the sciences for those who practice it.

When you have finished four years of intensive study, cramming all the knowledge into your brains that your teachers can force on you, and the wisdom of the ages from your tomes of medical literature, you sort it out, file it in your mental storehouse, and then step forth into an internship where you take on the responsibility of applying your learning, as you need it, to practical usage.

During internship and residency, you will often perspire freely. There is no easy way. I've never seen a decent internship (or residency) that couldn't make you sweat. You will often curse and worry, miss your sleep, your dates (or evenings with your wife if you're married), go without meals, and sometimes even forget to go to the bathroom. When you've done five histories and physicals between 8 P.M. and midnight and some joker on the outside sends in a diabetic coma, you'll want to commit mayhem. When everyone else goes off at noon Saturday and all the visiting men discharge their patients so that your service has 18 empty beds, don't shout for joy. Those beds will be full before the rest of the crew returns on Monday morning. And they're your responsibility.

Now, this is a dismal picture. It isn't meant to discourage you, though it might seem like it is. I bring it up merely to demonstrate a point to you. Each and every case you handle is different. Each and every case taxes your skill and ingenuity. Each and every case demands some of what you learned in Medical School and some of what is known as common sense. The cases you get in the hospital are the worst cases, the puzzlers, the stinkers that make it tough for the practicing doctor on the outside. He sends them to you for help. And you learn to tie your developing ability in with his and with your colleagues to solve problems. You learn that medicine isn't all in the books, that medicine isn't all science, and that the art of medicine has many facets.

When you go forth finally to hang out your shingle, you will gradually realize some other things. First of all, a very great number of your cases will require only the common sense treatment. You may prescribe, because the *idea* of the medicine rather than the medicine itself will have a salutary effect. Secondly, you will suddenly realize how little you know about medicine, and you will start having cases that you may want to send into the hospital—cases that are worse than any *you* ever saw in the hospital. Now *you* have to guess at a tentative diagnosis at the bedside, without the assistance of your books and laboratory work. You are learning, rapidly, that in order to live, in medicine, you must cooperate with other doctors.

I believe that one of the prime requisites toward good citizenship for a doctor is that he be a *good* doctor, the best doctor that he can possibly be. Your job, henceforth, is to serve humanity as an artisan in medicine. You cannot do this, in the modern world, alone. Your mind, good as it is, cannot hope to know everything, and you must often seek help in order to do a *better* job.

A good citizen is any person who is an asset to his community, who helps others and who takes pride in community betterment. There are many good citizens in every walk of life. As a physician you will have a chance to improve your community which is not just happenstance. As one of the leaders in your community life you will have a definite responsibility in the health, welfare and business problems that exist there. This comes with the practice of medicine, more or less automatically. If you accept this responsibility you do yourself and your profession a credit; if you refuse to accept it you do your community and medicine generally a disservice.

You are becoming a unique individual. You are approaching the time when you will be one of a certain few—one of less than 200,000 individuals

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in this country—who are fitted to advise and prescribe and control the health of our nation. Many of you will have opportunities to do more for your fellow men than will almost any other group of people. I say *almost* any other group. I am thinking specifically of those men of the cloth, the ministers and priests and rabbis that make up our religious orders. You will be called on many times to work with them. You may find yourself hearing confessions. You may have to make life and death decisions. You probably will all too frequently have to assist departing souls in their leave-taking and console and support those left behind. I have often said that no man who has a brain in his head is really an atheist. I am certain that no physician can be an atheist for long. You need religion and religion needs you. The more you work with people the sooner you will understand this. And in your religious duties which are different than anyone else's, you become a better citizen. Belong to a church, try to understand religion, practice the Golden Rule as a physician, and be a better citizen.

Another duty that you have as a citizen and as a business man is to take part in the political life of your community. This may only amount to going out once a year and casting an intelligent ballot. If you are willing to do so you may take part in a particular campaign, or contribute to a political candidate's war chest. Just be well established before you do it. Not infrequently doctors have run for public office, from members of local school boards or welfare boards all the way up to United States Senators and Congressmen. We have five physicians in our General Assembly of Virginia at the present time. In any event, exercise your right to vote every single voting day. Far too many people oppose the things you stand for, and the votes are what count when the chips are down.

There are many other ways you can be a good citizen. You will be the eyes and ears of Public Health in your community. You will be able to (and should) advise on health problems generally.

As a physician, many opportunities will come to you to participate in activities that are only partially connected with medicine. Most towns have many semi-medical organizations. The Welfare Board, Red Cross, Community Chest, Heart Association, T.B. Association, and others need physicians on their boards to help them. I know from experience that the lay public is loaded with people who will help serve on these community projects. They are well meaning, will work hard, can do good jobs. But they are rank amateurs in medical problems and they need *your* judgment, medical knowledge and advice. Not only that—you need to help them to protect yourself and the medical profession from their ill-advised attempts to take medical matters into their own hands. For six years I sat as medical advisor to our Community Chest Board that paid hospital and doctors' bills of indigent patients. We got the ones that weren't eligible for welfare. We spent as much as $38,000.00 per year. Many times doctor's bills would have been refused if someone hadn't been there to explain what the doctor did to require his fee. Not infrequently I could call the doctor, discuss it with him doctor-to-doctor (which no lay person could do) and he might reduce his bill on occasion. So you see, there are many places of this type where you benefit the public, yourself, and your profession by being a good citizen.

Perhaps by now you can realize that being a good citizen has a lot of possibilities.

Never forget that in addition to being a physician you are a human being. You have hormones floating about in your system, certain procreative instincts, two eyes in your head, two arms to help demonstrate your affections, and an upper and lower lip that pucker easily. The chances are in favor of your becoming a parent.

I'm not going to give a lecture on how to become a parent. If you don't already know, it's a very easy process to learn. But you want to be a *good* parent as well as a *good* doctor. Some of you probably already have children, most of you will have. If you haven't observed it by now, a physician's children often have only a part-time father. He usually gets home after they go to bed, may leave before they go to school, seldom has Saturday at home like other, normal people, and leaves his family stranded in church or walks out in the middle of dinner on Sunday. My wife, in such moments of exasperation, has sometimes commented that all doctors should be bachelors. In any event, we find so many parents have too much time on their hands these days and enjoy their "freedom" so much that they don't even want to be bothered with their children. Freedom to do what you want is like money—the more you have the more you want. Conversely, the average doctor, in my experience, wants to be with and enjoy his family but simply can't get away from his practice long enough to do it.

Now let me warn you of one thing. As your family grows up, barring unforseen changes in our way of living, you will produce a pretty good income

for it. This fact will not of itself protect those youngsters of yours from trouble or problems. A great many of the boys and girls who are called juvenile delinquents now come from better than average homes. They are sometimes from high income families, and they are sometimes from high intelligence families also.

Every child needs both parents. He learns many things from each one, and neither parent can substitute adequately for the other. Do your best to give your children a frequent dose of life with father. They'll be better kids and you will be a better citizen.

Many of the things I have said could be translated, with a minor change of wording, to apply to any teacher, business man or member of another professional group. Many of them apply to your responsibility to the general public as a physician. You have certain obligations to other members of the medical field also. It is your duty to join and support the medical societies, local, state and national, that function in your area. They exist for you and by you. They exist primarily to help you do a better job and while there are times when you may think their actions are not understandable, if you look into the problem you will find they are usually quite democratic, quite fundamental and very necessary to maintain order and prevent chaos.

You will need to belong to one or more hospital staffs in the area of your practice. Work with the staff, not against it. If you can improve it, or the hospital, try to do so. Don't condemn it if you find fault with it. Join it, stick with it, keep at it until your way or a better one prevails. Your community will be better.

If there is a medical school in your area, offer your services, no matter how small. Do something to help the medical trainee, as have the teachers who have trained you. I'll guarantee you won't suffer from it, and you may come out well ahead in the long run.

You and your family will be under continuous and careful scrutiny by your patients and friends, by the newspapers, (by the U. S. Internal Revenue Bureau), by people you never heard of, and by other doctors. If you lead a good life, if you are honest and sincere and try to live by the Golden Rule, you will always fulfill your responsibility as a good citizen. And my experience has certainly been that in return you will have a great many wonderful things happen to you to make your life very worthwhile.

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Studied for Heart Disease

The value of exercise in preventing heart disease has again been shown in a new study of former Harvard College football players. The study, made by Dr. William C. Pomeroy, Los Angeles, and Dr. Paul Dudley White, Boston, was reported in the June 7 Journal of the American Medical Association.

An attempt was made to follow up 424 Harvard students who won their football letter in the years 1901-1930. Of these, in 1955, 126 were known to have died and 292 to be alive, while six could not be traced. The cause of death was known for 87 of the 126. Among these, coronary heart disease was responsible for 25 deaths, or 29 per cent. Cerebral hemorrhage, generalized arteriosclerosis, and congestive heart failure accounted for eight more deaths, making the total 33 cardiovascular deaths, or 38 per cent. Cancer apparently caused 11 deaths; pneumonia and war injuries, 9 each; accidents, 8; suicide, 4, and miscellaneous, the rest.

These football players who showed coronary heart disease were compared to others without the disease for body build, weight gain, personal family status, family history, habits of exercise, use of alcohol and tobacco, and diet.

"One of the most significant findings in the study was the apparent protection afforded by the continuation of a program of heavy exercise." "Those who maintained even moderate habits of exercise were less prone to coronary heart disease, and no individual in this study who maintained a heavy exercise program happened to develop coronary heart disease."

The study also showed the following: Body build did not differ significantly between the two groups, but there was more weight gain in the coronary group than in the others. There were more divorces in the coronary group. This "may or may not" represent a factor of stress. There was a higher percentage of family history of coronary heart disease in the coronary group than in the control group.

Mental Health . . . .

CYRIL R. MILL, Ph.D.

The Effect of Thorazine on Fantasy

Many physicians are beginning to prescribe the ataractic drugs for children, but often feel that in doing so they are, to a certain extent, working blind. The amount of drug to recommend is unknown, and conditions where its use is advisable are uncertain. The literature contains very few references to studies of the application of these drugs to children, although a mass of research is appearing related to the use of tranquilizers with adult patients. Freed and Peifer report a generally agreed upon finding that chlorpromazine (Thorazine) is useful in controlling the hyper-activity, destructiveness and impulsive behavior which are often postencephalitic sequelae of epidemic encephalitis in children. Thorazine has also been used for varying periods of time on behavior disorders or conduct disturbance as well as with schizophrenic children.

A survey of the literature by the present writer revealed no studies which explored the relationship between a tranquilizing drug and the "inner life" of the child—or its effect on his world of fantasy. One report mentions that children under medication did not drop their fears of the dark, ghosts, etc. Various observers have reported that hostility appears to diminish in children under medication after a period of about two weeks and that they seemed to be more willing to encounter and to tolerate new situations.

The question of the effect of Thorazine on fantasy arose while watching a child during regularly scheduled play interviews in a residential treatment center. This twelve-year-old boy in the course of psychotherapy had revealed a fantasy which equated shooting dart pistols with sexual aggressiveness. At about that time, in order to help him get through a period of increased excitement and an exaggeration of his psychotic behavior, he was placed on 300 mg Thorazine t.i.d. In the next interview his activity was slowed down markedly. Instead of dashing around the room firing his dart pistol, he laid down on the floor and quietly shot the darts at the target. The fact that he held the pistol over the genital area while shooting was clear indication that the fantasy was the same even though the physical activity was reduced.

It seemed important to conduct a study to determine whether varying amounts of Thorazine effected any change in the fantasy of children. Since psychotherapy with children depends so much upon the presence of fantasy which produces symbolic behavior, any effect of medication toward reduction or alteration of fantasy should be known.

Two children were selected for the study, a fifteen-year-old boy, diagnosed primary behavior disorder, conduct disturbance, and a ten-year-old girl diagnosed chronic brain syndrome, post encephalitis with behavioral reaction. These two were selected because they had both given evidence of symbolic behavior in previous interviews, they were being seen on a regular individual basis, and already they were receiving Thorazine daily. A physician was selected for each child to set up a schedule of medication covering a period of five weeks. Every three days the dosage was varied. Placebos rounded out the prescription so that throughout the experimental period the child received the same number of pills daily. Dosages varied from all placebo to 600 mg/day for the boy, and from all placebo to 250 mg/day for the girl.

Thorazine was selected as the medication for this study because it is quickly excreted from the body. This permitted observations on successive days at varying levels of total dose. Only the physicians knew the dosage levels until the completion of the study.

The observers who carried out the study were two occupational therapists. The boy was seen three times a week for individual activity in a shop. The girl was seen four times a week in a play therapy room for part play and part tutoring sessions. During these hours the therapists watched for fantasy activity as evidenced by symbolic behavior. Since fantasy cannot be observed directly it had to be judged by the presence of symbolic behavior which was defined as "any behavior which departed appreciably from the realistic and concrete".

As an example, it is usually possible in a therapy

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Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

session while watching a child hammering, to tell whether he is realistically pounding a nail into a board or symbolically taking revenge for some previous hurt through displacement onto the materials. The observers used such criteria as the child's verbalizations, intensity of affect, productivity or progress toward real goals, purposiveness of behavior, and repetitiveness, as the means by which they identified realistic behavior and differentiated it from behavior which, being symbolic, communicated the fantasy of the patient to the therapist.

The therapists rated each day's session on a seven-point scale. Their rating was for quantity of fantasy or symbolic behavior displayed in the session as a whole. They also wrote a brief record of each session giving the content or quality of fantasy observed. During a pre-experimental run of two weeks the raters received training in making their observations using the rating scale and writing the anecdotal records. A helpful feature of the research design was the use of two completely separate experimental units consisting of patient, physician, and therapist which had the effect of building into the design its own replication.

At the end of the experimental period a correlation was run between the numerical ratings of amount of symbolic behavior and the daily dosage of medication. The correlation showed that there was no significant relationship between fantasy and medication level.

On the other hand there were changes in the level of symbolic activity which had to be accounted for in some fashion. Examination of the ratings in chronological order revealed a trend toward higher levels of symbolic behavior with the approach of Christmas, which occurred on the third week of the study, and a falling off after New Year. This suggested that fantasy may be more related to events in the living environment than to the intake of medication.

It is known that for limited periods of time, placebos alone have a certain psychic value. One report relates that children fell asleep after taking a placebo pill which they thought was a soporific; others taking the same pill became hyperactive because they had been told it was a "pep" pill. In the present study no difference could be observed in production of fantasy on the days when the child received placebo. This was probably because in a long continued course of medication, any psychic values become diminished, with only bona-fide medicinal effects remaining. In the case of Thorazine these seem to be chiefly a calming down of motor activity. On the other hand, the one day that the girl received a rating of seven—the highest for fantasy—she was receiving 100 mg/day. It was on this day that she learned she could go home for Christmas.

SUMMARY

Two children were rated for fantasy level during therapy hours over a month's period during which time their Thorazine intake was systematically varied. The therapists had no knowledge of whether the child was receiving placebo or up to 600 mg/day during this period. There was no evidence to support the hypothesis that Thorazine affects fantasy in any way. There was evidence that events in day-to-day living have considerable effect in stimulating fantasy, regardless of the medication level.

Pre-Paid Medical Care....

Edited by
RICHARD J. ACKART, M.D.

Paid-Up-At-65

In an article recently published by *Medical Economics*[1], a physician proposes that the answer to the Forand Bill is to be found in "paid-up-at-65" insurance. The author, Dr. Alexander A. Jaworski, is chairman of the prepayment health insurance committee of the Pawtucket (R. I.) Medical Society; he writes, "I see no reason why all existing Blue plan contracts shouldn't be replaced by a new contract offering paid-up-at-65 health coverage. Naturally, such coverage would cost the subscriber more during his working years. But he'd get continuing benefits without the burden of continuing premiums after his retirement."

That any foot-in-the-door type of legislation, such as the Forand Bill, must somehow be obviated is clearly recognized by all physicians who sincerely believe the American public will be best served by continuance of our voluntary, free-enterprise system of providing medical care. Accordingly, the thought and effort that Dr. Jaworski put into his proposal must be appreciated. Nonetheless, there is so much at stake that each and every suggestion, such as "paid-up-at-65", must be studied critically—it is too late for trial and error methods. The first mistake will be our last. The public's disappointment in that mistake undoubtedly will be translated into legislative action—but fast.

To appraise the proposal that Blue Cross issue "paid-up-at-65" contracts, one must of course have an understanding of Blue Cross operations. The majority of Blue Cross Plans operate on this basis: A Blue Cross Member Hospital provides the Subscriber-patient with a semi-private room and with all of the so-called "extras" the patient requires; for this care the hospital makes no charge directly to the patient but looks to the Plan for reimbursement of its cost of providing these services. Advances in medical science, and other factors perhaps as constant, currently are causing the cost of providing hospital services to increase at a rate of more than 5% per year. Blue Cross is meeting these ever-increasing hospital costs. Because what goes out must first come in, Blue Cross must arrange for adequate income or adequate reserves in order to do so.

One problem then, as concerns Blue Cross and "paid-up-at-65" benefits, is the difficulty of making accurate predictions about the future cost of operating hospitals, so that an appropriate amount of "surcharge" to Subscribers might be made to cover the Plan's future expenditures in their behalf. Blue Cross, unlike insurance, has no fixed liability. As of today, anyway, it is seemingly impossible to predict accurately the level of Blue Cross liabilities —hospital operating costs—as far in advance as ten years. But in order to compute the amount of "surcharge" payable by its "average Subscriber" (whose age is under 40), a Plan would have to know what hospital operating costs are going to be during the 1-to-20 year period of that Subscriber's retirement, which period will not start until 25 years after the computation must be made.

With its relatively fixed liability, based on stipulated limits to its indemnity payments, insurance does not have this problem; however, limited indemnification per se creates another problem—not for the insurance company but for the public. For example, fifteen years ago a "$6 and $60" was a popular, and reasonably adequate, health insurance policy. It provided for $6.00 a day toward the charges for a hospital room and general care, and up to $60 for the "extras". If, fifteen years ago, a policy holder had retired with such a policy on a paid-up basis, the adequacy of his coverage today would be less than 30% of what it had been. This retired octogenarian would someplace have to find maybe $100 to $150 to meet the balance of the hospital's charges for a ten-day stay—assuming he was lucky enough to require only ten days of hospitalization. Things are moving so fast that what this year might be an adequate indemnity is apt to be "sub-standard" in 1960, and patently inappropriate in 1965.

Dr. Jaworski suggests that Blue Cross might handle the problem presented by those folks who are now close to retirement age, i.e., persons who would pay a "surcharge" for only five or ten years, by reducing their paid-up benefits. Reducing benefits for retirees—provision of "sub-standard" bene-

fits, certainly—is completely contrary to Blue Cross policies and philosophies. To provide for "paid-up-at-65" benefits a Plan, the majority of whose members were about 40 years old, might "guesstimate" (as explained, a good estimate would be impossible) that a "surcharge" of a certain amount would have to be paid by each member, over an average period of 25 years, into a special reserve. It is suggested that a Subscriber who paid this "surcharge" for only five years would have to accept reduced paid-up benefits. But the actuarily necessary reduction would be in the same ratio as 5 years is to 25 years. Thus, a person who was 60 when the paid-up program started, upon retirement at 65, would have available to him as paid-up benefits only one-fifth of the care he is apt to need—80% of his hospital charges would have to be paid out of his own pocket. Blue Cross would not countenance such an arrangement—nor would the public.

The "paid-up-at-65" idea, neither through Blue Cross nor through insurance indemnification, appears to be a feasible, adequate answer to the Forand Bill. But are not Blue Cross-Blue Shield and a few (too few) insurance programs presently making available a truly satisfactory answer to the medical-economic problems that prompted it?

The Division of Program Research of the U. S. Department of Health, Education, and Welfare recently released the information that "the findings from the September 1956 survey and the comparison with the March 1952 survey point to the conclusion that persons entering the retirement years continue the health insurance they obtained when they were younger, *if it is possible to do so*"[2] Blue Cross-Blue Shield, from their very beginning, have always permitted subscribers to continue membership after retirement—and have continued the memberships of survivors of deceased retirees.

In many Blue Cross Plan areas, as in Virginia, the ratio of 65-and-over members to total members is the same as the comparable ratio computed from the census figures for the total population of those areas. This fact substantiates the conclusion that retirees and oldsters are indeed able to continue their Blue Cross memberships, paying the regular community-rate which is charged by Blue Cross.

The HEW researchers state, however, "Until the time comes when insurance can be continued after age 65 by most persons (including widows after their family policy has been terminated by the death of their spouse), it appears that large segments of the aged population will live out their years without this form of personal security."[3] The majority of commercial insurance programs currently in effect make no provision for retirees—much less for widows of retirees—and therefore are actually making almost mandatory the passage of Forand-type of social legislation.

But if all organizations in the prepayment field were to offer truly equitable conversion opportunities, to charge community-rates, and to be public health oriented in policy and philosophy—then folks would be able, on a voluntary basis, to obtain the personal security they are demanding. Then the problems of financing health-care for oldsters would be ameliorated, at least to the extent that need for Forand-type of legislation would be obviated. If such community-minded, public-health oriented practices and policies are incompatible with commercial interests, then commercial enterprises should abandon or be forced from the public health field, leaving it to organizations which are dedicated to solving public health problems.

1. "How to Fight The Forand Bill", Alexander A. Jaworski, M.D., Medical Economics, July 7, 1958.
2. Research and Statistics Note No. 17, June 11, 1958.
3. Ibid.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Study of Cases of Paralytic Poliomyelitis in Triply-Vaccinated Persons

While cases of paralytic poliomyelitis are rare in persons who have received three doses of Salk poliomyelitis vaccine given at properly spaced intervals, when they do occur they are of very great scientific interest. Some cases originally assumed to have been genuine poliomyelitis, after more careful study have been proved to have been due to agents other than one of the three known types of poliovirus.

In 1957 there were 279 cases of poliomyelitis reported throughout the country in triply-vaccinated individuals. Of these, 178 were classified as non-paralytic poliomyelitis and 101 as paralytic. On further study investigators were unable to recover poliovirus from 70 of these 101 cases. It is evident that only 31 were actual cases of paralytic poliomyelitis.

The National Foundation for Infantile Paralysis has recognized its duty to protect the integrity of the Salk poliomyelitis vaccine as the agent to be used in prevention of paralytic poliomyelitis. To this end the Foundation, in 1958, has undertaken the intensification of studies leading to the confirmation of the diagnosis of paralytic poliomyelitis in persons who have been triply-vaccinated and disproving the diagnosis in persons whose illnesses have been caused by other agents. Dr. Salk, himself, will make a special investigation of reported cases including an intensive study of other viruses in stool specimens and antibody determinations in blood specimens. The Foundation emphasizes the fact that they are not concerned with illnesses diagnosed as non-paralytic poliomyelitis and with paralytic poliomyelitis in other than triply-vaccinated individuals.

The best method of discovering whether an apparent failure of Salk vaccine is actually due to an agent other than poliovirus is by isolation of virus from a stool specimen and by antibody tests of two blood specimens—the first taken at the onset of illness and the second during convalescence. The National Foundation for Infantile Paralysis has stressed the fact that these specimens should be obtained by the patient's physician or by the local health director who has been authorized to do so by the attending physician. Supplies have been sent to state representatives of the Foundation from Dr. Salk's laboratory:

1. Suitably labeled containers for stool specimens.
2. Venules in appropriately labeled containers for obtaining blood specimens.
3. Instructions for collecting and shipping the specimens.
4. The necessary forms to accompany the specimens.

Specimen containers are not being sent to local chapter chairmen of the Foundation because certain facts must be ascertained before the specimens are taken and it is the attending physician who supplies these facts. If too many are involved there may be a breach of the patient-physician relationship, which the Foundation does not wish to occur. Facts which the physician supplies are:

1. Whether the patient is really paralyzed.
2. Whether the patient really had three inoculations of Salk vaccine and the dates of injections.
3. The date of onset of illness and date of onset of paralysis.
4. Location and type of paralysis.

The chapter chairmen are urged to join in the scientific investigation by informing their state representative of any reported case of paralytic poliomyelitis in any person in his area who has received three injections of Salk vaccine. This is to be certain that the state representative is promptly informed so that he may offer these services to the attending physician and may assist in the arrangements to have the necessary specimens obtained and sent to Dr. Salk's laboratory. The chapter chairmen have been instructed that no attempt shall be made to obtain publicity on this particular study since it might create the erroneous impression that paralytic poliomyelitis among the triply-vaccinated is common.

Stool specimens should be obtained as soon as possible after the onset of illness and if difficult to obtain, a rectal swab will serve as a suitable substitute. The acute blood specimen should also be collected as soon as possible after the onset of the illness. The convalescent blood specimen should be

drawn three or four weeks after the onset of the illness. Stool specimens should be stored frozen until shipped. Blood specimens should not be frozen but should be refrigerated until shipped. All specimens should be obtained by the attending physician or by the local health director. The containers and proper forms will be supplied by the state representative of the National Foundation for Infantile Paralysis and he will assist in shipping the specimens to Dr. Salk's laboratory. He will also notify the Laboratory of the University of Pittsburgh by telephone before the specimens are shipped, the estimated time of their arrival and the name of the airline and the number of the flight which will actually make the delivery in Pittsburgh. He will confirm this information to the Virus Research Laboratory of the University of Pittsburgh by telegram.

It is clearly evident that the cooperation of all physicians is needed in reporting immediately a suspected case of paralytic poliomyelitis in a triply-vaccinated individual. The cooperation of the local director of health is needed in promptly notifying the state representative of the National Foundation for Infantile Paralysis so that proper containers and forms can be supplied. The health director can be of further service in seeing that the specimens are collected at the proper time and that the state representative of the Foundation has them in hand to forward to Dr. Salk's laboratory as outlined above. With all concerned working together to reach the same goal, it should be possible to definitely diagnose any case of paralytic poliomyelitis that may develop in a triply-vaccinated individual.

The state representatives for the National Foundation for Infantile Paralysis are:

O. Lee Hodgkins (State and Eastern District)
1 N. Fifth Street
Richmond, Virginia

Wally Anderson (Northern District)
1 N. Fifth Street
Richmond, Virginia

William S. Board (Western District)
920 S. Jefferson Street, Room 206
Roanoke, Virginia

Monthly Report of Bureau of Communicable Disease Control

	June 1958	June 1957	Jan.-June 1958	Jan.-June 1957
Brucellosis	4	2	11	12
Diphtheria	1	3	13	8
Hepatitis	14	39	139	268
Measles	2914	900	19412	4326
Meningococcal Infec.	5	6	48	39
Meningitis (Other)	19	24	102	99
Poliomyelitis	6	5	10	16
Rabies (In Animals)	11	26	189	177
Rocky Mt. Spotted Fever	9	14	10	16
Streptococcal Infec.	427	474	4399	4242
Tularemia	3	2	21	19
Typhoid Fever	5	3	15	20

Summer Eating Rules

Television, air conditioning, and eating between meals have combined to produce a new hot weather syndrome among children. It is characterized by the "pale, flabby, tired child who has gained excessive weight during the warm weather because he has stayed in an air-conditioned house watching television most of his waking hours and has indulged in frequent between-meal snacks that have spoiled his appetite for well-balanced meals."

Poor appetite in the summer and faulty eating habits may result from uncontrolled use of cold, high-caloric drinks or food, from failure to take adequate exercise, and from overindulgence in between-meal snacks.

A procedure for avoiding these problems was outlined by Drs. Floyd A. Norman and Edward L. Pratt in a special report on feeding children during hot weather, prepared for the American Medical Association Council on Foods and Nutrition. It appears in the April 26th A.M.A. Journal.

Hot weather imposes no special dietary requirements for children. They need the same well-balanced diet they always need, along with extra water. They do not need additional quantities of salt. Only adults under "conditions of great physical activity associated with extremely large outputs of sweat" need sodium chloride tablets. It is unwise for adults to condition children to dislike hot weather or to foist summertime food fads on them.

They noted that if infants and children eating well-balanced diets do not tolerate ordinary heat, they should be examined for illness rather than changing their diets.

The authors are affiliated with the department of pediatrics, University of Texas Southwestern Medical School, the Children's Medical Center, and Parkland Memorial Hospital, Dallas.

Miscellaneous . . . .

Principles of Medical Ethics.

This is the sixth of the series of "Principles of Medical Ethics", the first appearing in the February issue. Each section will be reviewed, accompanied by a detailed explanation from the Judicial Council of the American Medical Association.

SECTION 7

In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him, or under his supervision, to his patients. His fee should be commensurate with the services rendered and the patient's ability to pay. He should neither pay nor receive a commission for referral of patients. Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient.

TRADITIONAL CONCEPTS INCLUDED WITHIN SECTION 7

The Judicial Council is of the opinion that Section 7 of the Principles of Medical Ethics, 1957, embraces the spirit and intent of several sections of the 1955 edition of the Principles, including Chapter I, Section 6 (Payment for Professional Services); Chapter I, Section 8 (Dispensing of Drugs and Appliances by Physicians); Chapter I, Section 9 (Rebates and Commissions); Chapter VII, Section 1 (Limits of Gratuitous Service). These sections are reproduced below as guides in the interpretation of Section 7.

Chapter I, Section 6 (Payment for Professional Services) 1955 edition of the Principles of Medical Ethics:

> The ethical physician, engaged in the practice of medicine, limits the sources of his income received from professional activities to services rendered the patient. Remuneration received for such services should be in the form and amount specifically announced to the patient at the time the service is rendered or in the form of a subsequent statement.
>
> Unethical methods of inducement to refer patients are devices employed in a system of patronage and reward. They are practiced only by unethical physicians and often utilize deception and coercion. They may consist of the division of a fee collected by one physician ostensibly for services rendered by him and divided with the referring physician or physicians or of receiving the entire fee in alternate cases.
>
> When patients are referred by one physician to another, it is unethical for either physician to offer or to receive any inducement other than the quality of professional services. Included among unethical inducements are split fees, rebates, "kickbacks," discounts, loans, favors, gifts, and emoluments with or without the knowledge of the patient. Fee splitting violates the patient's trust that his physician will not exploit his dependence upon him and invites physicians to place the desire for profit above the opportunity to render appropriate medical service.
>
> Billing procedures which tend to induce physicians to split fees are unethical. Combined billing by physicians may jeopardize the doctor-patient relationship by limiting the opportunity for understanding of the financial arrangement between the patient and each physician. It may provide opportunity for excessive fees and may interfere with free choice of consultants, which is contrary to the highest standards of medical care.

Chapter I, Section 8 (Dispensing of Drugs and Appliances by Physicians) 1955 edition of the Principles of Medical Ethics:

> It is not unethical for a physician to prescribe or supply drugs, remedies, or appliances as long as there is no exploitation of the patient.

Chapter I, Section 9 (Rebates and Commissions) 1955 edition of the Principles of Medical Ethics

> The acceptance of rebates on prescriptions and appliances or of commissions from those who aid in the care of patients is unethical.

Chapter VII, Section 1 (Limits of Gratuitous Service) 1955 edition of the Principles of Medical Ethicss

> Poverty of a patient, and the obligation of physicians to attend one another and the dependent members of the families of one another, should command the gratuitous services of a physician. Institutions and organizations for mutual bene-

fits, or for accident, sickness and life insurance, or for analogous purposes, should meet such costs as are covered by the contract under which the service is rendered.

ANNOTATIONS to SECTION 7 OPINIONS AND REPORTS OF THE JUDICIAL COUNCIL

The following are excerpts from Reports and Opinions of the Judicial Council which are applicable in interpreting SECTION 7.

FEE SPLITTING DEFINED

By the term secret splitting of fees is meant the sharing by two or more men in a fee which has been given by the patient supposedly as the reimbursement for the service of one man alone. By secrecy is meant that the division of the fee is done without the knowledge of the patient or some representative of the family. It includes those cases in which the term assistant is used as a subterfuge to obtain a part of the fee which otherwise could not be rightfully claimed. The term commission refers to those rebates, "rake offs," or pro rata moneys sent for referring patients or favors received and not for medical and surgical services rendered.

The Judicial Council recommends for adoption by the House of Delegates the following resolutions:

RESOLVED, That any member of the American Medical Association found guilty of secret fee splitting or of giving or receiving commissions shall cease to be a member of the American Medical Association.

RESOLVED, That the House of Delegates of the American Medical Association recommends to each constituent body that it endeavor through the action of its various county societies to reform the various abuses of lodge practice in their separate communities in order that the lodges may give an adequate service to its members and an honorable remuneration to the medical men. (*1912 Report*). [Adopted by the House of Delegates.]

LOCAL SOCIETIES MUST COMBAT FEE SPLITTING

As has been done in former reports, the Council wishes to record its condemnation of fee splitting wherever it may be found, and to urge component societies and constituent associations to purge their membership of any who wilfully refuses to desist from such practice, the continuance of which can only bring dishonor and reproach on the medical profession. (*1924 Report*).

STOCK COMPANIES OF PHYSICIANS TO OPERATE CLINICS OR LABORATORIES

Several proposals looking to the organization of groups of physicians in cooperative projects have been submitted to the Judicial Council. In most instances these have been in the nature of stock selling and stock holding schemes whereby physicians interested would realize on investments in proportion to the amount of work referred by them to the "clinic" or laboratory operated under the particular scheme. After its examination of these proposals, the Council has concluded that nearly all of them appear to be open to the criticism that they are, or may be suspected of being, essentially fee-splitting projects. The Council, therefore, has refused to give its approval to joint stock companies of physicians organized for the purpose of operating clinics or laboratories with the stock owned in part or in whole by physicians connected only as stockholders. (*1926 Report*).

FEE SPLITTING IS GIVING OR RECEIVING A COMMISSION

The Judicial Council holds to the opinion that a division of a fee constitutes a giving and a receiving of a commission. (*1929 Report*).

DIVISION OF FEES AND ACCEPTANCE OF COMMISSION

There have been widespread inquiries and complaints concerning the practice of medicine by hospitals, the division of fees between hospitals and doctors, the acceptance of commissions or rebates by ophthalmologists from opticians, the extensive unethical instances of contract practice particularly in the Pacific Coast states. Concerning all of these matters it is sufficient to say that wide extent of an unethical practice does not make it ethical. Ethics has to do with principles, not numbers or locality. A procedure unethical in one part of the country cannot be ethical under the same circumstances in another. Because the percentage of rebate is large in comparison, and in a year amounts to a considerable sum, and although many of the practitioners in a specialty may accept those rebates, the acceptance is no more ethical than for the general practitioner to accept a rebate on the occasional truss he may prescribe. The Judicial Council deplores such ignoring of ethical principles, not only because of the extent

of the practice but because in many instances the plea of the financial necessity cannot be offered as an excuse. The Council can only publicize the abuses and express its severe condemnation of them. It has no power in itself of control or correction. (*1934 Report*).

Division of Income By Members of a Group

It is important to bear in mind that the division of income given to members of a group practicing jointly or in partnership must be in proportion to the value of the services contributed by each individual participant. To divide the income of the group equally after deducting expenses would be in fact the division of fees, which is not only unethical no power in itself of control or correction. (*1934 Report*)

Division of Physician's Fee with Hospital

The suggestion has been made by some hospitals that physicians who utilize the hospital facilities should pay to the hospital a percentage of the fees which they receive from their patients while being cared for in the hospital.

The Council has many times expressed itself on the subject of fee splitting. The suggested proposal is clearly a case of splitting or sharing professional fees with a lay organization which should not render professional service in the first place, but which, in addition, has already levied its regular bill for the services which it legitimately rendered. (*1952 Report*).

Physician's Bill Should Not Include Bills of Colleagues

The Judicial Council has held many times that when a surgeon renders a bill for his fee it should not include bills from colleagues who act as assistants or anesthetists, but these colleagues should render their own bills. The Judicial Council has also held that associate membership, no matter by what name called, in a clinic, of a physician who lives in another town from that in which the clinic is located, and who sends patients to this clinic for treatment and receives compensation therefor, is practicing unethical medicine as well as the physicians who own the clinic. In fact, a physician who does this and lives in the same town where the clinic operates would be unethical if he practices in this manner.

A patient is entitled to the best treatment possible and a physician referring a patient to a consultant should select the consultant because of his ability and not because of pecuniary gain to the physician referring the patient. (*1952 Report*).

Physicians Should Render Separate Bills

In many cases insurance companies insist on a joint or combined bill, but the bill is being paid in most instances by two checks. This is not considered unethical, and all insurance plans which do not pay the individual physician in this manner should be urged to do so.

The Judicial Council is still of the opinion that, when two or more physicians actually and in person render service to one patient, they should render separate bills. There are cases, however, in which the patient may make a specific request to one of the physicians attending him that one bill be rendered for the entire services. Should this occur, it is considered to be ethical if the physician from whom the bill is requested renders an itemized bill setting forth the services rendered by each physician and the fees charged. The amount of the fees charged should be paid directly to the individual physicians who rendered the services in question.

Under no circumstances shall it be considered ethical for the physicians to submit joint bills unless the patient specifically requests it and unless the services were actually rendered by the physicians as set out in the bill. (*1954 Report*).

Rebates from Sale of Medicines or Appliances

It should be well known by this time that the traditional interpretation of the Principles of Medical Ethics by the various Judicial Councils in the history of the Association has been that the doctor may receive no profit whatever from his patient other than payment for rendered medical services. Hence it should be apparent that no rebate of any kind, in any form or from any source can be accepted. This applies also to rebates coming from agents or owners of optical companies. They are, in every case, absolutely unethical. (*1947 Report*).

Agreement Between Physicians as to Fee—Billing Procedure

Chapter I, Section 6 of the Principles of Medical Ethics (1955 edition) suggests that remuneration received for professional service should be in an amount announced to the patient and states that billing procedures that violate the patient's trust or that place profit above appropriate medical service are unethical. On no occasion has the Judicial Coun-

cil expressed the opinion that it is unethical for physicians to consider the economic status of a patient in a conscientious endeavor to keep the total cost of medical and surgical care within the economic limitation of the patient. This practice, carried out in the interest of the patient, is the antithesis of unethical practices that increase the costs of medical care and cause deterioration of medical service. In the opinion of the Judicial Council, it is not unethical for physicians mutually to establish the relative value of their professional services, as such services relate to the economic ability of the patient to pay, but each physician should submit a bill for the service he has himself rendered and receive payment therefore directly from patient. (*JAMA, May 7, 1955*).

Purchase of Medical Practice on Percentage Basis

It is the opinion of the Judicial Council that the purchase of a medical practice on a percentage basis is contrary to and in violation of Chapter 1, Section 6 of the Principles (1955 edition). A physician may pay anything he wants to for the practice as long as a set price is established, but it is unethical for a physician to pay a percentage of the income of the practice that he has purchased as payment for it. The use of a percentage of fees or an indefinite sum as the purchase price for a medical practice results in dividing fees paid for professional service with a third party—a stranger to the physician-patient relationship. The Council recognizes that once a price has been established it may be paid according to the mutual agreement of the parties and that payment of an established price predicated on a percentage of the income of the purchaser is not contrary to the Principles. The Council would point out that is axiomatic that a physician must bill a patient for professional services that he actually and in person renders to the patient. He must not divide that fee with another. Such practice violates the physician-patient relationship and may be regarded as a commission for having referred the patient. Further, the Council believes that the use of a percentage arrangement indirectly tends towards solicitation of patients for or on behalf of the purchasing physician, because the seller clearly derives greater profit from greater income. (*JAMA, May 7, 1955*)

Fee Contingent on Outcome of Litigation

The Principles of Medical Ethics (Chapter I, Section 6, 1955 edition) provided that remuneration received for professional services rendered the patient should be in the form and amount specifically announced to the patient at the time the service is rendered, or in the form of a subsequent statement. It is the opinion of the Judicial Council that the contracting for, or acceptance of, a contingent fee by a doctor, which is based on the outcome of litigation, whether settled or adjudicated, is unethical. The Judicial Council would point out that the laborer is worthy of his hire and that the physician, having only his services to sell, has an obligation to place a fair value on those services. Ethically this value should be based upon the value of the service rendered by the physician to the patient and not upon the uncertain outcome of a contingency that does not in any way relate to the value of the service. Furthermore, the Council is of the opinion that the physician's obligation to uphold the dignity and honor of his profession precludes him from entering into an arrangement of this nature because, if a fee is contingent upon the successful outcome of a claim, there is the ever-present danger that the physician may become less of a healer and more of an advocate—a situation that does not uphold the dignity of the profession of medicine. (*JAMA, October 15, 1955*).

Entertainment of Other Doctors

In its 1951 Report to the House of Delegates, the Council stated that it does not consider expenditures by physicians for the entertainment of other physicians as unethical. There are circumstances under which a professional obligation may rest on a physician to entertain other physicians. It certainly is not an uncommon practice and is recognized by the profession generally as entirely proper and justifiable. (*JAMA, March 30, 1957*)

Itemized Bill

Nothing in the Principles of Medical Ethics proscribes the submission of an itemized bill by a physician to his own patient for medical service he actually rendered to the patient. (*JAMA, March 30, 1957*).

Combined or Joint Bills

The Judicial Council has stated repeatedly (in its June 1954 Special Report and its December 1952 Annual Report, to cite two occasions) that, when two or more physicians actually and in person render service to one patient, they should render separate bills. The Special Report of June 1954 indicates two exceptions to this general rule, namely, when a

patient requests a single bill or when an insurance company demands one. The Council has insisted, however, that these instances are to be recognized as exceptional cases and not routine. (*JAMA, March 30, 1957*)

Separate Bill From Anesthesiologist

Medicine has always insisted that anesthesia is a medical service, which should be administered by a licensed, trained physician or by another adequately trained person who acts under the direction and supervision of a physician who assumes responsibility for the medical service rendered. A physician properly should present a bill for the services he renders to the patient. (*JAMA, March 30, 1957*).

Referring Physician as Assistant—Billing Procedure

When two or more physicians actually and in person render services to one patient they should render separate bills. It is contrary to the traditions of the Association and spirit of the Principles for the surgeon to bill for the total surgical procedure and pay an assistant from the amount so received. The practice fails to impress patient with the gravity of surgical care—which is not a one-man procedure—and it tends to make the surgical fee appear disproportionately high.

The Judicial Council suggests, in the best interest of the profession, that the patient be fully advised of the need for an assistant, and told that this is necessary in his own best interest. The patient should also be advised that the assistant will earn and charge a fee for his services and will send a bill for his services direct to the patient, which the patient should pay to the assistant. (*JAMA, March 30, 1957*).

Physician Employed By Clinic or Another Physician

It is not unethical in itself for a physician to accept part-time employment under another physician or in a clinic. The physician so employed and his employer must observe, however, all Principles of Medical Ethics in their relationship with each other and with their patients. (*JAMA, March 30, 1957*).

Stock Ownership on Pharmaceutical Firm

The physician as a citizen has the right to make investments according to his own best judgment. The fact that he is a physician should not preclude him from investing in the stock of a pharmaceutical company. Returns from his investment could not, in any practical sense, be considered a rebate or an indirect income gained secretly from patients for whom he may have prescribed products of the firm whose stock he holds, provided, of course, no subterfuge is employed and no unusual control of the company is exercised by the doctor. (*JAMA, March 30, 1957*).

Ownership of Pharmacy By Physician

The Principles of Medical Ethics were revised in Atlantic City at the June 1955 Session of the House of Delegates to read as follows: "It is not unethical for a physician to prescribe or supply drugs, remedies, or appliances as long as there is no exploitation of the patient."

Under this language, the Judicial Council does not believe it can be considered unethical for a physician to own or operate a pharmacy provided there is no exploitation of his patient. (*JAMA, March 30, 1957*).

Current Currents

SPECIAL REPORT ON ACTIONS OF THE HOUSE OF DELEGATES OF THE AMA

VIRGINIA has been honored by the election of Dr. W. Linwood Ball, Richmond, to the office of Vice-President of the American Medical Association.

RELATIONS BETWEEN MEDICINE and the UMWA Welfare and Retirement Fund was the subject of lengthy discussion. A reference committee report concurred with an opinion of the Board of Trustees that final action on two resolutions adopted in December, 1957, should be postponed until the final report of the Commission on Medical Care Plans is received. One of those resolutions, number 20, declared that "a broad educational program be instituted at once by the American Medical Association to inform the general public, including the beneficiaries of the Fund, concerning the benefits to be derived from preservation of the American right to freedom of choice of physicians and hospitals as well as observance of the 'Guides to Relationships Between State and County Medical Societies and the UMWA Welfare and Retirement Fund' adopted by this House last June."

The House of Delegates, however, by a vote of 110 to 72, adopted a floor amendment which directed the AMA Headquarters Staff, under supervision of the Board of Trustees, to proceed immediately with the campaign which was originally ordered at Philadelphia last December and that the Council on Medical Service be relieved of any further responsibility in the matter.

SOCIAL SECURITY COVERAGE for self-employed physicians was a subject of seven resolutions. The House disapproved of three which called for polls or a referendum of the AMA membership, one which favored state-by-state participation in Social Security, and two which called for compulsory inclusion on a national basis. Instead, the House adopted a resolution pointing out that "American physicians always have stood on the principle of security through personal initiative," and reaffirming unequivocal opposition to the compulsory inclusion of self-employed physicians in the Social Security system.

ATTENTION WAS CALLED to the $619,614,000 spent by the federal government on hospitalized medical care of Veterans in VA hospitals during 1957, of which about 75 per cent had non-service connected disabilities. Pointing out that ways and means of obtaining economy in federal government are allegedly being sought by Congress at this time, the House urged congressional action to restrict hospitalization of Veterans at VA hospitals to those with service-connected disabilities. It also recommended that AMA suggest to Dean's Committees that they restrict their activities to VA hospitals admitting only patients with service-connected disabilities.

MEDICARE was the subject of a resolution calling for repeal, modification or amendment of Public Law 569. The House took the position that desired changes in the Medicare program could be accomplished through modification of the present implementing directives without the necessity for new legislation. The House reaffirmed the action taken last year in New York recommending that the decision on type of contract and whether or not a fee schedule is included in future contract negotiations should be left to individual state determination. Also reaffirmed was the Association's basic contention that the Dependent Medical Care Act as enacted by Congress does not require fixed fee schedules; the establishment of such schedules would be more expensive than permitting physicians to charge their normal fees, and fixed fee schedules would ultimately disrupt the economics of medical practice.

PROBLEMS connected with the raising and distributing of funds since development of the concept of united community effort were reviewed by the House. The following statement, offered in the form of amendment from the floor, was adopted: "(1) That the House of Delegates reiterate its commendation and approval of the principal voluntary health agencies. (2) That it is the firm belief of the American Medical Association that these agencies should be free to conduct their own programs of research, public and professional education and fund raising in their particular spheres of interest. (3) That the House of Delegates respectfully requests that the American Medical Research Foundation take no action which would endanger the constructive activities of the national voluntary health agencies. (4) That the Board of Trustees continue actively its studies of these perplexing problems looking forward to their ultimate solution."

THE HOUSE adopted a resolution requesting the Board of Trustees to make an immediate survey and re-evaluation of "the functions and effectiveness of the over-all A.M.A. legislative system, including the Washington office, in the light of present-day needs of the government, public and medical profession alike for effective liaison between government and medicine on all matters affecting the public's health and adequate, prompt and accurate transmittal to the full membership of the A.M.A. of information on all current public issues in which the physician has a direct interest." The House asked that the Board of Trustees implement, as rapidly as possible, all changes and additions that its survey discloses are desirable to achieve the basic purpose of the resolution, "effective public and government relations."

MIAMI BEACH was chosen to replace Chicago as the site of the 1960 Annual Meeting. New York will be the site of the 1961 Annual Meeting.

* * * *

This summary covers only a few of the important subjects considered by the AMA House of Delegates. The items were selected because of their unusual interest.

Editorial . . . .

"Guilty of Malpractice"

A RECENT DEVELOPMENT in the ever changing medical scene is the not infrequent statement by a medical writer that if such and such a situation arises, the physician who does not do so and so is "guilty of malpractice". It is easy to understand how an author may be so carried away by the intensity of his enthusiasm when writing about his favorite topic that he will find the next morning he has over-emphasized the message he penned the previous evening. Dangerous statements of this type should, however, be blue-penciled before they appear in print.

Malpractice suits are a constant hazard to any physician and especially so to those who practice surgical specialties. A surgeon should not be subjected to misleading statements in medical journals which may be used against him in court with devastating results, regardless of the remoteness of the application. It is too much to expect an attorney, however conscientious, not to avail himself of such a ready-made and heaven-sent weapon. He will not seek to find wherein the situation in question differs from that described by the incautious medical author. If he is worth his salt he will endeavor to show that the two cases were indeed identical and that the physician charged with malpractice stands indicted by the printed word of a medical confrere.

An article in a medical journal and especially an article in a publication, that has been bound in book form, carries far more conviction to a layman than the identical information given verbally by the same individual. More often than not, a topic that is handled in this unguarded manner deals with a new and frequently unproven or debatable subject. To add to the problem, the writer of such an article is frequently well known in his field and his name may carry much weight with the jury.

All of this means that such expressions should be avoided and those authors who favor the Virginia Medical Monthly with their manuscripts are earnestly requested to omit from their articles any reference to malpractice.

H. J. W.

Post Hoc, ...

"SURGERY (or autopsy) confirmed the radiologic diagnosis." This statement, common in medical speech and writing, merits inspection.

The radiologic reasoning may have been in error, though the conclusions be present (*not confirmed*) on definitive study, so that the less rigorous radiologic thinker may appear better, and the more rigorous one, worse. This may obtain, for example, when the clinician (or radiologist) "arrives" at the radiologic diagnosis under the stimulus of strong psychologic set stemming from thorough knowledge of the clinical picture

with less knowledge of anatomic variation and inherent shortcomings of the roentgen method (v. Editorial, Virginia Medical Monthly, 85:220-221, 1958). The radiologist who avers that the radiologic diagnosis was incorrect is a voice crying in the wilderness. It was "proved", wasn't it? It were better to keep his silence; his adherence to objectivity will serve him well sooner or later.

Relief of complaints following an anti-ulcer regimen, or the presence of a strongly positive tuberculin test in a child, for other examples, has been and will continue to be offered as "proof" that the chance accumulation of barium between two folds in the first case, and a pulmonary infiltration in the second case, were due to peptic ulcer and tuberculosis respectively.

Koch's postulates must have been evolved in an effort to straiten thinking in the heyday of relating bacteriologic discovery to disease. Strict fulfillment in a given case would leave no doubt about the relation of the microorganism to the disease. Nevertheless, in many cases the relation may be so close that assumption of their cause and effect is justified even though the four postulates cannot be fulfilled rigorously. Transference of these postulates to radiology is not possible, of course. The nearest we can come to their radiologic equivalent would be in the presence of surgical or autopsy specimens: *ex corpore* radiography of the offending organ should be superimposable upon the prior study of the intact patient. While only the minority of radiologic diagnoses may be proved in this sense, it calls our attention to the need for especial avoidance of the fallacy of *"Post hoc ergo propter hoc"*, as extended to radiology.

CHRISTIAN V. CIMMINO, M.D., F.F.R.

News . . .

Dr. W. Linwood Ball Honored.

Virginia has been singularly honored by the election of Dr. W. Linwood Ball of Richmond to the office of Vice-President of the American Medical Association.

Thus, within the brief span of four years, the Old Dominion has seen two of its sons elevated to ranking positions in the world's best known medical organization. Dr. Walter B. Martin, Norfolk, was President of the AMA during 1954-55.

The next 13 months promise to be busy ones for Dr. Ball, who was only recently installed as President of the Virginia Academy of General Practice. Such responsibilities, however, are not new to this hard working campaigner for a free, progressive medical profession. He has served as President of the Richmond Academy of Medicine and is now in his third year as a Delegate of The Medical Society of Virginia to the AMA. His committee assignments are too many to enumerate, but it should be mentioned that as Chairman of the Society's Medicare Advisory Committee, he has contributed much time and effort to the task of making sure that the program operates on a sane and sound basis in Virginia.

The Medical Society of Virginia is proud indeed of Dr. Ball's record of service and extends to him sincere congratulations on this most recent, and perhaps greatest, recognition of his dedicated abilities.

New Members.

The following new members have been admitted into The Medical Society of Virginia since the list published in the July issue of the Monthly.

John Boyd Bullock, M.D., Richmond
Robert Lemont Cassidy, M.D., Culpeper
Alvin Cohen, M.D., Petersburg
Donald Bryant Crider, M.D., Staunton
Adel Demiray, M.D., Galax
Alberto J. Garcia, M.D., Falls Church
John Fraser MacLellan, M.D., Winchester
Benjamin Strawbridge Perkins, M.D., Marion
Donald Rathbun, Jr., M.D., Charlottesville

Heribert George Saexinger, M.D., Newport News
Bertram Fairley Townsend, M.D., Newport News
Armistead Marshall Williams, M.D., Richmond

Health Insurance Problems.

The medical profession has an interest in the success or failure of voluntary health insurance. For some years, The Medical Society of Virginia has had an active Medical Service Committee.

The health insurance industry is cognizant of the fact that the success of its product depends on the ability of the companies to conduct their affairs in a manner which appears reasonable to the medical profession. The profession provides the service paid for by insurance and renders the information on which claims are paid.

In view of this inter-relationship, it is appropriate that there be an on-going liaison between the two groups.

The Medical Service Committee of The Medical Society of Virginia has designated a sub-committee to consider the problems of health insurance. Likewise, the insurance industry through the Health Insurance Council has appointed a sub-committee to meet with and discuss mutual problems with the medical society.

The composition of the committees is as follows:

Sub-Committee on Voluntary Prepayment Plans of The Medical Service Committee of The Medical Society of Virginia

Dr. William Johns, *Chairman*
Dr. Beverley Clary
Dr. Richard Ackart
Dr. Harry B. Stone

Sub-Committee on Medical Relationships of Virginia Committee, Health Insurance Council

Dr. Ennion Williams
Mr. William Rowe
Mr. Warren Foster
Mr. Birch Douglass

These committees, by no means, have the function of policing or coercing their colleagues. Each committee should be able to perform an educational function by assisting its parent group to understand the others problems. Physicians and insurance companies are invited to refer problems or suggestions for discussion.

State Board of Medical Examiners.

Governor Almond has appointed Dr. Joseph Gladstone, Exmore, to the Board, succeeding Dr. W. R. Payne, Newport News. He also reappointed Drs. Russell M. Cox, Portsmouth, and John C. Watson, Alexandria. All terms are for five years.

Advisory Council of Nursing Training.

The following physicians have been appointed by Governor Almond to the new Advisory Council of Nursing Training: Dr. Edward L. Alexander, Newport News; Dr. James D. Hagood, Clover; Dr. W. C. Caudill, Pearisburg; and Dr. J. Raymond Hutcheson, Arlington.

Cancer Research Building at University.

Dean Thomas H. Hunter, University of Virginia School of Medicine, has announced the letting of the contract for construction of a four-story addition to the present three-story Cancer Research Building. This addition of approximately 15,824 square feet will provide 19 research laboratories with necessary service facilities. At present there are nine clinical departments without laboratory space, who are having to do research in borrowed space.

Construction of the new addition was made possible by a grant of $261,000 from the U. S. Public Health Service, matched by a gift in equal amount from the family and friends of the late Mary Stamps Suhling.

Vanderbilt University Alumni Club.

The Vanderbilt University Alumni Club of Virginia held an organizational meeting on June 9th. Dr. Elbyrne G. Gill, Roanoke, was elected president; Dr. Clyde Bailey, Danville, vice-president; and Dr. Waldo Wattles, Lynchburg, secretary-treasurer.

Staff of Virginia Council on Health and Medical Care.

Mrs. Cynthia Neel Warren has joined the staff of the Virginia Council on Health and Medical Care as Director of the Health Personnel Program. She will be in charge of the Council's activities in the field of health personnel. For the past ten years, Mrs. Warren has been the Executive Secretary of the Kentucky State Nurses Association.

Dr. Kenneth Crispell

Has resigned his position as associate professor of internal medicine at the University of Virginia, effective September 1st, to accept a position at the New York Medical College as professor and chairman of the department of medicine.

Staff of Louise Obici Hospital.

Dr. David Corcoran was installed as president of the medical staff of the Louise Obici Hospital, Suffolk, on July 1st. Other officers are Dr. George Car-

roll, vice-president, and Dr. Charles Rawls, secretary. Dr. Arthur Taylor is chairman of the general practice section; Dr. J. E. Rawls, Jr., chief of surgery; Dr. Lawrence Statson, chief of radiology; Dr. Edward Joyner, chief of internal medicine; Dr. W. H. Rogers, chief of obstetrics and gynecology; and Dr. Carroll, chief of pathology. Dr. Ivan Steele is immediate past president.

Dr. James B. Littlefield,

Instructor in Surgery at the University of Virginia, has been awarded the John Horsley Memorial Prize. The award is made every two years by a committee of the medical faculty for the best thesis based on research. Dr. Littlefield made a study of the changes which take place in the lungs when open heart surgery is performed, using a heart-lung pump.

The John Horsley Memorial Prize was established in 1925 by the late Dr. J. Shelton Horsley in honor of his father. It consists of an endowment fund and a certificate of award.

Winston-Salem Heart Symposium.

The ninth annual Winston-Salem Heart Symposium will be held at the Hotel Robert E. Lee, Winston-Salem, North Carolina, October 3rd. The program will be: Newer Diagnostic Tools in Cardiovascular Disease with Dr. James V. Warren, Durham, N. C., as moderator, and Drs. George Harrell, Gainesville, Florida, Frank Damman, Charlottesville, and Emory Miller, Winston-Salem, as panel members; Who are Candidates for Cardiac Surgery by Dr. Damman; Modern Techniques in Cardiac Surgery by Dr. W. Harry Muller, Charlottesville; Gluttony, Obesity, and Vascular Deterioration by Dr. William Parson, Charlottesville; Surgical Approaches to Occlusive Peripheral Vascular Diseases by Dr. Muller; Resuscitation in Sudden Death with Dr. William Burnett, Chapel Hill, as moderator and Dr. Leonard Nanzetta, Winston-Salem, and Drs. Muller and Harrell as panel members; and Fats in Your Future by Dr. Harrell. There will also be a demonstration of the Flowmeter and Heart Lung Machine by Drs. Merrill P. Spencer, Frank R. Johnston and Robert Cordell.

There is no registration fee and physicians and wives are guests of the Forsyth County Medical Society for the social hour and dinner.

Further information may be obtained from Miss Anne W. Berry, Executive Director, Forsyth Heart Society, 235 Nissen Building, Winston-Salem, North Carolina.

Norfolk County Medical Society.

Dr. Kenneth K. Wallace has been installed as president of this society, succeeding Dr. J. Franklin Waddill. Other officers are: president-elect, Dr. W. Wickham Taylor; vice-president, Dr. John Franklin; recording secretary, Dr. Meyer Krischer; corresponding secretary, Dr. Harry Taylor, Jr.; treasurer, Dr. Robert B. Gahagan; local councilor, Dr. Aubrey L. Shelton; speaker, Dr. W. Callier Salley; and vice speaker, Dr. John Thiemeyer.

Heart Association Awards.

At the annual meeting of the Virginia Heart Association, distinguished service medallions were presented to Dr. R. Earle Glendy, Roanoke; Drs. Reno R. Porter and Paul D. Camp, Richmond; Dr. Ernest G. Scott, Lynchburg; and Dr. R. Bryan Grinnan, Jr., Norfolk.

Urology Award.

The American Urological Association offers an annual award of $1000 (first prize $500) for essays on the result of some clinical or laboratory research in urology. Competition is limited to urologists who have been graduated not more than ten years and to hospital internes and residents doing research work in urology.

For full particulars, write the Executive Secretary, William P. Didusch, 1120 North Charles Street, Baltimore, Maryland. Essays must be in his hands before December 1st.

Dr. James M. Moss,

Alexandria, has been elected president of the Medical Council of the Washington Metropolitan Area. He is also president of the Alexandria Medical Society. The Council is composed of the president, president-elect, immediate past president and executive secretary of each of the six medical societies of the Washington Metropolitan Area.

Dr. William E. Josey

Is associated with Drs. Mason C. and William C. Andrews in the practice of obstetrics and gynecology. Their office is in the Medical Arts Building, Norfolk.

Dr. Isadore S. Zfass,

Richmond, has been elected treasurer of the American Electroencephalographic Society. He has been a Councillor of the Society since 1955 and is chairman of the committee on public and legal relations.

Dr. Zfass was elected Councillor of the Eastern Association of Electroencephalographers at its last

meeting in New York and Councillor of the Southern Electroencephalographic Society at its last meeting in Miami Beach.

Appointments at Lynchburg Training School.

Dr. Benedict Nagler, Superintendent of the Lynchburg Training School and Hospital at Colony, announces the following appointments:

Dr. Warren V. Huber assumed duties as Director of Research and Training in mid April. He had formerly been Chief of Neurology at the Veterans Administration and Associate Clinical Professor of Neurology at the University of Colorado School of Medicine, Denver. Dr. Huber graduated from the Long Island College of Medicine and completed his training in neurology at the Neurological Institute of New York of the Columbia-Presbyterian Medical Center. In addition to teaching at the University of Colorado, he has been on the teaching staff of other colleges, among them being the Medical College of Virginia.

In early June, Dr. Milton H. Kibbe became Clinical Director, coming from Springfield, Massachusetts, where he had been in private practice. He is a graduate of Tufts College Medical School and completed his graduate training in neurology and electroencephalography at Columbia University and Harvard Medical School. Dr. Kibbe is consultant neurologist to the Shriner's Hospital for Crippled Children.

American Association of Medical Assistants.

The Second Annual Convention of this Association will be held at the Palmer House, Chicago, October 31-November 2, 1958. The American Association of Medical Assistants is made up of men and women employed as assistants in the offices of Doctors of Medicine. There are three chapters in Virginia—Lynchburg, Richmond and Petersburg.

The purposes of the Association are: To inspire its members to render honest, loyal and more efficient service to the profession and to the public which they serve; to strive at all times to cooperate with the medical profession in improving public relations; to render educational services for the self-improvement of its members and to stimulate a feeling of fellowship and cooperation among the Societies; and to encourage and assist all unorganized medical assistants in forming local and state societies.

Information concerning the organization and to assist with the formation of county and state societies may be obtained from Miss Hallie Cummins, R.R.L., Chairman of the Public Relations Committee, Medical Record Library, Caro State Hospital for Epileptics, Caro, Michigan.

Annual Scientific Paper Award.

The Southeastern Surgical Congress announces its Annual Prize Scientific Paper Award for 1959. The best unpublished contribution on surgery or allied subjects will be awarded $100.00 and expenses for the author to attend its next annual meeting in Miami Beach, Florida. The second place winner will receive $50.00 and the third place winner $25.00.

The contest is open to residents in AMA approved residencies in the Southeastern states, including Virginia.

Full information may be obtained from The Southeastern Surgical Congress, 1032 Hurt Building, Atlanta 3, Georgia.

Society for Clinical and Experimental Hypnosis.

The annual meeting of this Society will be held at the Morrison Hotel, Chicago, October 29-31. The program will include breakfast seminars, round-table luncheons, panel discussions and formal presentations. For a copy of the program and more detailed information, write to the Administrative Secretary, Society for Clinical and Experimental Hypnosis, 750 North Michigan Avenue, Chicago 11, Illinois.

American Board of Obstetrics and Gynecology.

The following Virginia physicians were made diplomates of the Board on May 16th: Dr. John C. Crawford, Virginia Beach; Dr. Thomas S. Lloyd, Jr., Fredericksburg; Dr. Francis R. Payne, Jr., Petersburg; Dr. Lucien W. Roberts, Jr., South Boston; Dr. John R. Saunders, Lynchburg; and Dr. Louis N. Waters, Portsmouth.

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Obituaries . . . .

Dr. Frank Wilmore Poindexter,

Prominent Newport News physician, died of a heart attack on the golf course on July 4th. He was seventy years of age and a graduate of the Medical College of Virginia in 1913. Dr. Poindexter practiced medicine on the Peninsula for more than forty years, specializing in eye, ear, nose and throat diseases. He had been a member of The Medical Society of Virginia for thirty-eight years.

A daughter, three sisters and two brothers survive him. A brother is Dr. W. O. Poindexter, also of Newport News.

Dr. Rolfe Louis Hillman,

Well known physician of Emory, died June 23rd, having been in ill health for some time. He was sixty-seven years of age and a graduate of Johns Hopkins University Medical School in 1918. Dr. Hillman had been teacher and physician at Emory and Henry College since 1925. He was known as "Li'l Doc" and was the biggest booster of the College. He attended all sports events and other collegiate activities. As a token of appreciation this year's edition of the college Annual was dedicated to Dr. Hillman. He had been a member of The Medical Society of Virginia for thirty-six years.

His wife, two sons and a daughter survive him.

Dr. Thomas Leon Grove,

Saluda, died July 2nd, at the age of forty-four. He was a native of Ronceverte, W. Va., and graduated from the Medical College of Virginia in 1939. Dr. Grove began his practice in West Virginia and moved to Saluda in 1949. He was in the army medical corps during World War II. Dr. Grove was a Mason and was a member of a number of civic and medical organizations. He was school physician for Christchurch Boys School near his home. Dr. Grove had been a member of The Medical Society of Virginia for eight years.

His wife, a daughter and three sons survive him.

Dr. Charles Francis McCaffrey,

Arlington Health Officer, died June 25th, at the age of fifty-two. He was a graduate of Georgetown University School of Medicine in 1933. During World War II, Dr. McCaffrey served as a commander in the United States Navy and was assigned to carriers. He had been a member of The Medical Society of Virginia for several years.

His wife, a son and a brother survive him.

Dr. Pope.

Dr. Samuel Byron Pope, fifty-three years of age, died April 2, following a heart attack. He was a well known Norfolk Physician, where he had practiced for twenty-six years.

A native of Norfolk, he was the son of Mrs. Mary Lee Pope and the late Samuel Barron Pope, and husband of Mrs. Lucille Ryerson Pope, whom he married in 1931. Besides his mother and wife, he is survived by one daughter and one sister.

He attended the Norfolk Public Schools, and obtained his higher education at the University of Virginia and the Medical College of Virginia, where he received his Doctor of Medicine degree in 1930. After serving his internship at Norfolk Protestant Hospital he did his residence work at North County Community Hospital in Glen Cove, New York. He was a member of the Norfolk County Medical Society, The Medical Society of Virginia, the Seaboard Medical Society and the American Medical Association.

Dr. Pope was a member of the Freemason Street Baptist Church, a Shriner of the Khedive Temple, a Knights Templar and a member of the Kiwanis Club.

In his daily work and associations, he was always kind, gracious and dignified. He was a congenial colleague and a loyal friend. Dr. Pope's untimely death is a great loss to the Community and to the Medical Profession, and we, his friends, shall greatly miss him.

THEREFORE, BE IT RESOLVED that the members of the Norfolk County Medical Society are grieved at the passing of our friend and fellow physician, and wish to extend our deepest sympathy and love to the family of the late Dr. Pope, in the great loss they have sustained.

BE IT FURTHER RESOLVED that this resolution be recorded in the minutes of the Norfolk County Medical Society and copies sent to his surviving mother and wife, and to the Virginia Medical Monthly.

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The State Board of Medical Examiners of Virginia

The next meeting of the Virginia Board of Medical Examiners will be held in the Richmond Hotel, Richmond, Virginia, December 3, 1958. The examinations will be held in the same hotel December 4-6, 1958, inclusive. All applications and other documents pertaining to the examinations or to matters to be discussed by the Board must be on file in the Secretary's office on or before November 10, 1958. The Secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.

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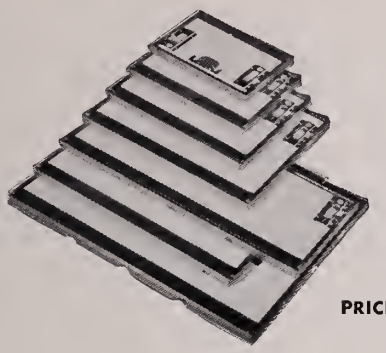
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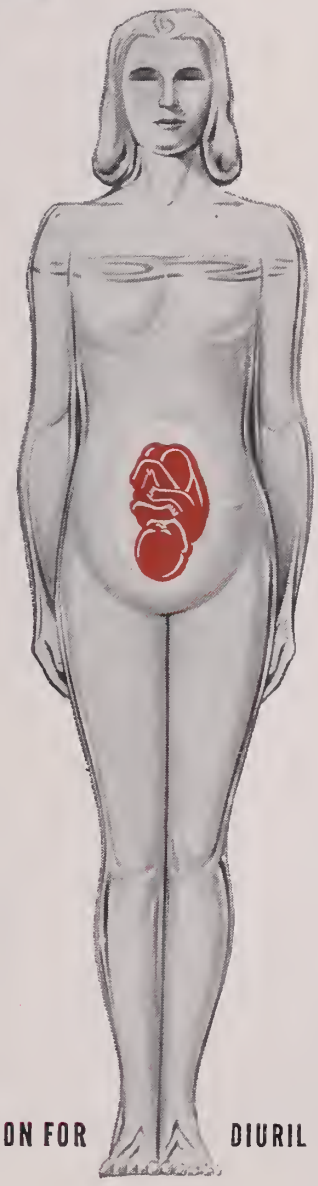
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SOCIETY	PRESIDENT	SECRETARY	TIME OF MEETING
Accomack County	Joseph L. DeCormis, Accomac	Dr. J. C. Doughty, Onancock	Quarterly
Albemarle County	M. D. Foster, Charlottesville	Dr. George Spence, Charlottesville	Monthly
Alexandria	James M. Moss, Alexandria	Robert K. Wineland, Alexandria	Monthly
Alleghany-Bath Counties	M. I. Hanna, Covington	George N. Chucker, Clifton Forge	Bi-Monthly
Amherst-Nelson Counties	Lyddane Miller, Amherst	J. F. Thaxton, Tye River	
Arlington County	Thos. A. McGavin, Arlington	Bertram C. Snyder, Arlington	Monthly
Augusta County	B. K. Weems, Waynesboro	William C. Smith, Waynesboro	Quarterly
Bedford County	D. H. Robinson, Bedford	O. B. Darden, Bedford	Quarterly
Botetourt County	M. S. Stinnett, Buchanan	E. L. Coffey, Buchanan	
Buchanan-Dickenson Counties	Thomas McDonald, Grundy	J. S. Richardson, Grundy	Monthly
Charlotte County	Stuart Wilson Tuggle, Keysville	Thomas Watkins, Drakes Branch	
Culpeper County	J. Bernard Jones, Culpeper	James P. Baker, Culpeper	Monthly
Danville-Pittsylvania	Samuel Newman, Danville	Samuel Atkins, Danville	Monthly
Fairfax County	Thomas E. Haggerty, Falls Church	Andrew Tessitore, Vienna	Monthly
Fauquier County	Evan H. Ashby, Jr., Remington	James L. Dellinger, Warrenton	Monthly
Floyd County	J. C. Rutrough, Willis	F. C. Bedsaul, Floyd	
Fouth District	Robert Keeling, South Hill	Clyde W. Vick, Jr., Petersburg	Five times a year
Fredericksburg	T. S. Lloyd, Jr., Fredericksburg	W. T. Liddle, Fredericksburg	Monthly
Halifax County	William R. Watkins, South Boston	John R. Frierson, Jr., South Boston	Quarterly
Hanover County	John D. Hamner, Jr., Ashland	Claude K. Kelly, Mechanicsville	October
Hampton	Frank Kearney, Phoebus	Helen Dorsey, Hampton	Quarterly
Hopewell	D. P. Moore, Jr., Hopewell	W. P. Youngblood, Hopewell	Monthly
James River	Russell Snead, Columbia	J. H. Yeatman, Fork Union	Quarterly
Lee County	Beryl H. Owens, Rose Hill	H. A. Kinser, Pennington Gap	Quarterly
Loudoun County	John D. Wynkoop, Leesburg	Robert A. Orr, Leesburg	Monthly
Louisa County	Griffith B. Daniel, Louisa	A. R. Southall, Louisa	Only call meetings
Lynchburg	J. E. Haynsworth Lynchburg	Lewis F. Somers, Lynchburg	Monthly
Medical Society of Virginia	H. C. Bates, Jr., Arlington	R. I. Howard, Richmond	Richmond, October 12-15, 1958
Mid-Tidewater	A. W. Lewis, Jr., Aylett	M. H. Harris, West Point	Quarterly
Newport News	I. Floyd Nesbitt, Newport News	John Q. Hatten, Newport News	Monthly
Norfolk County	K. K. Wallace, Norfolk	Meyer Krischer, Norfolk	Semi-Monthly
Northampton County	H. L. Denoon, Jr., Nassawadox	John R. Freeman, Cape Charles	Quarterly
Northern Neck	Horace Kerr, Colonial Beach	M. B. Lamberth, Kilmarnock	Quarterly
Northern Virginia	M. J. W. White, Luray	Dennis P. McCarty, Front Royal	Three times a year
Orange County	David H. Miller, Orange	J. G. Bruce, Jr., Gordonsville	Call Meetings
Patrick-Henry Counties	Lester A. Faudree, Bassett	George W. Curwen, Fieldale	Quarterly
Portsmouth	Paul W. Robinett, Portsmouth	Harry D. Cox, Portsmouth	Monthly
Princess Anne County	Herbert Swertfeger, Va. Beach	Julian A. White, Virginia Beach	Monthly
Richmond	Webster Barnes, Richmond	Patty R. Boatwright, Richmond	Semi-Monthly
Roanoke	David S. Garner, Roanoke	Peter A. Wallenborn, Jr., Roanoke	Monthly
Rockingham County	George Nipe, Harrisonburg	Catherine Craun, Harrisonburg	Quarterly
Rockbridge County	Brooke B. Mallory, Lexington	O. Hunter McClung, Lexington	Monthly
Russell County	Robert F. Gillespie, Lebanon	W. A. Davis, Dante	
Scott County	W. L. Griggs, Jr., Gate City	G. C. Honeycutt, Jr., Gate City	Monthly
Smyth County	O. O. Smith, Jr., Marion	R. D. Campbell, Saltville	Quarterly
Southwestern Virginia	Reverdy H. Jones, Jr., Roanoke	William S. Credle, Bristol, Tenn.	Semi-annually
Tazewell County	Courtney C. Bowens, Richlands	D. A. Cunningham, Richlands	Quarterly
Tri-County	J. W. Lambdin, Franklin	Irwin H. McNeely, Franklin	Quarterly
Tri-State	John K. Webb, Greenville, S. C.	R. B. Davis, Greensboro, N. C.	February
Va. Acad. Gen. Practice	W. Linwood Ball, Richmond	R. G. McAllister, Richmond	May 7-10, 1959
Va. Sec. Amer. Col. Chest Phys.	Edward S. Ray, Richmond	Charles G. Pearson, Charlottesville	October
Va. Sec. Amer. Col. Phys.	T. Dewey Davis, Richmond	William H. Harris, Jr., Richmond	March
Va. Diabetes Assoc.	Robert C. Crawford, Roanoke	Robert S. Hutcheson, Roanoke	May
Va. Ob-Gyn. Soc.	Paige E. Thornhill, Norfolk	Brock D. Jones, Jr., Norfolk	Semi-annually
Va. Orthopedic Soc.	J. H. Allan, Charlottesville	R. H. Fisher, Roanoke	Spring
Va. Pediatric Soc.	Harry D. Cox, Portsmouth	O. Watts Booth, Newport News	Semi-annually
Va. Peninsula Soc.	O. J. Legg, Warwick	B. H. Inloes, Jr., Hampton	Monthly except June, July & Aug.
Va. Neuropsychiatric Soc.	Thomas F. Coates, Richmond	W. D. Buxton, Charlottesville	April & October
Va. Radiological Soc.	Wm. H. Whitmore, Norfolk	Frank Kearney, Phoebus	Semi-annually
Va. Soc. Anesthesiology	Lewis E. Mangus, Alexandria	Campbell Harris, Jr., Richmond	Semi-annually
Va. Soc. of O. L. & O.	Calvin T. Burton, Roanoke	M. K. Humphries, Jr., Charlottesville	October
Va. Soc. of Pathology	Karl Menk, Staunton	George J. Carroll, Suffolk	3 times a year
Va. Surgical Soc.	Guy W. Horsley, Richmond	Robert Payne, Jr., Norfolk	October
Va. Urological Soc.	Richard Lowe, Roanoke	Frank N. Buck, Jr., Lynchburg	October
Washington County	David M. Brillhart, Abingdon	James M. Suter, Abingdon	
Williamsburg-James City	Linwood Farley, Williamsburg	B. E. Roebuck, Williamsburg	Monthly except for June, July & Aug.
Wise County	John H. Dellinger, Norton	Gordon E. Shull, Big Stone Gap	Every other month except Aug.
Wythe-Bland	P. C. Hendrix, Wytheville	E. C. Lanz, Wytheville	Monthly



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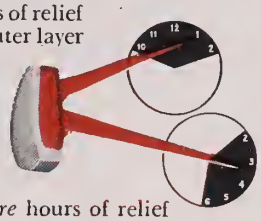
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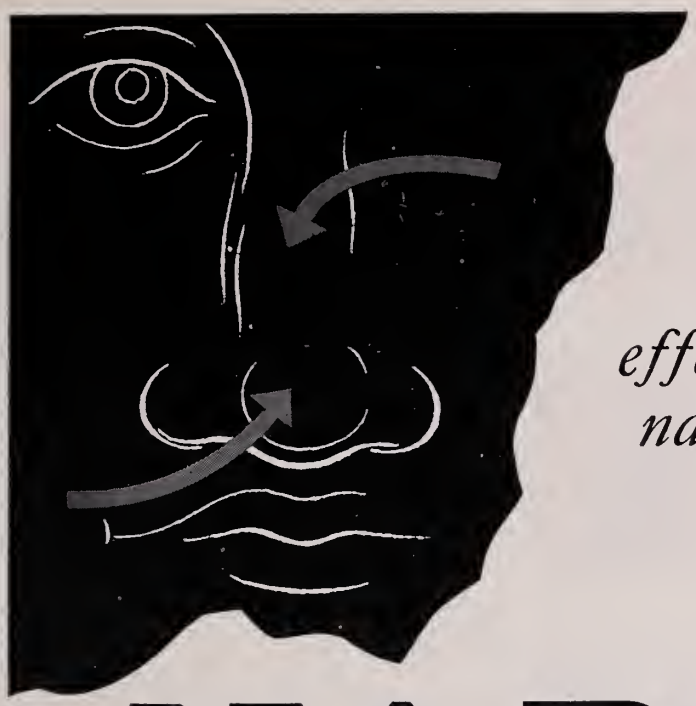
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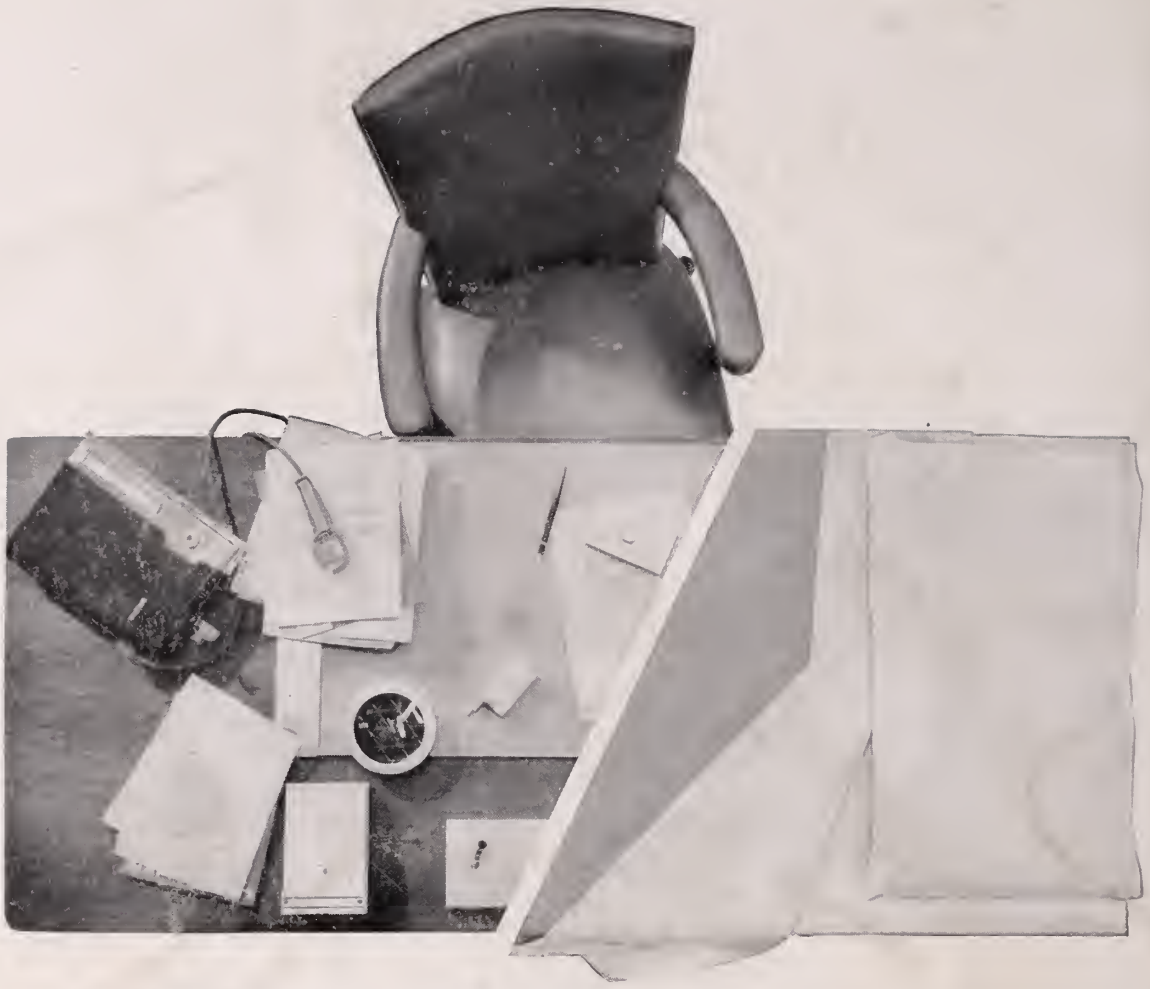
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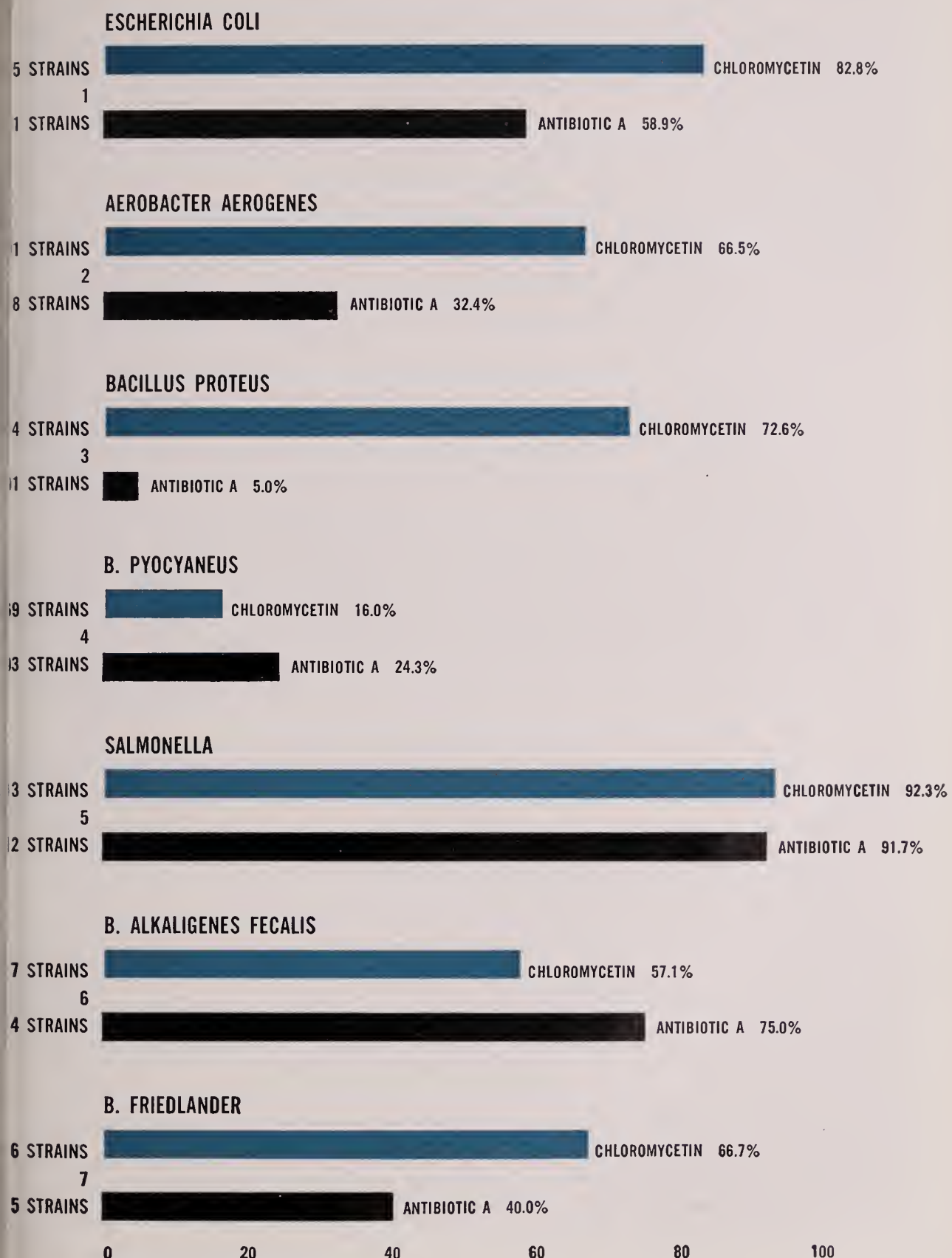
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(1) Hagedorn, A. B.. Proc. Staff Meet. Mayo Clin. 32 705 (Dec. 11) 1957.
(2) Best, W. R.; Louis, J., and Limarzi, L. R.: M. Clin. North America (Jan.) 1958, p. 3.

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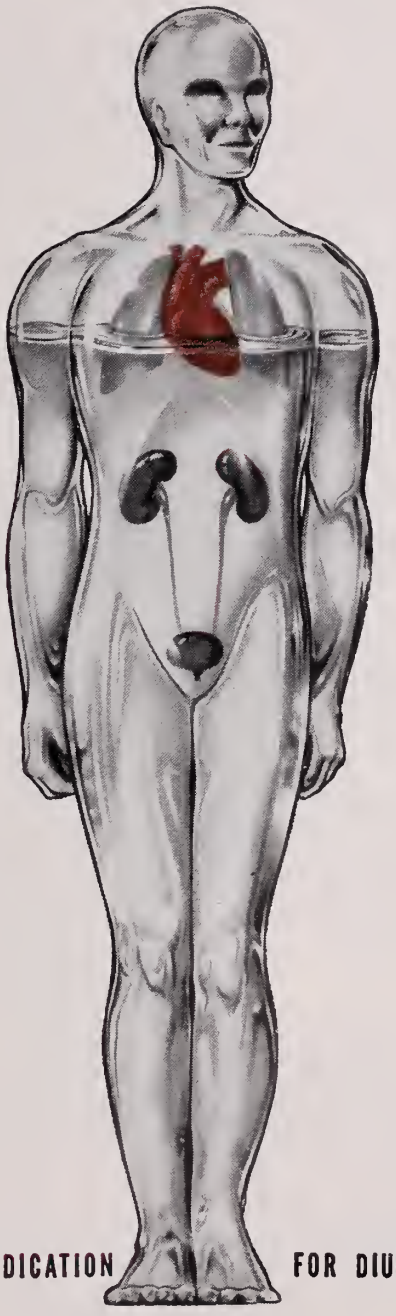
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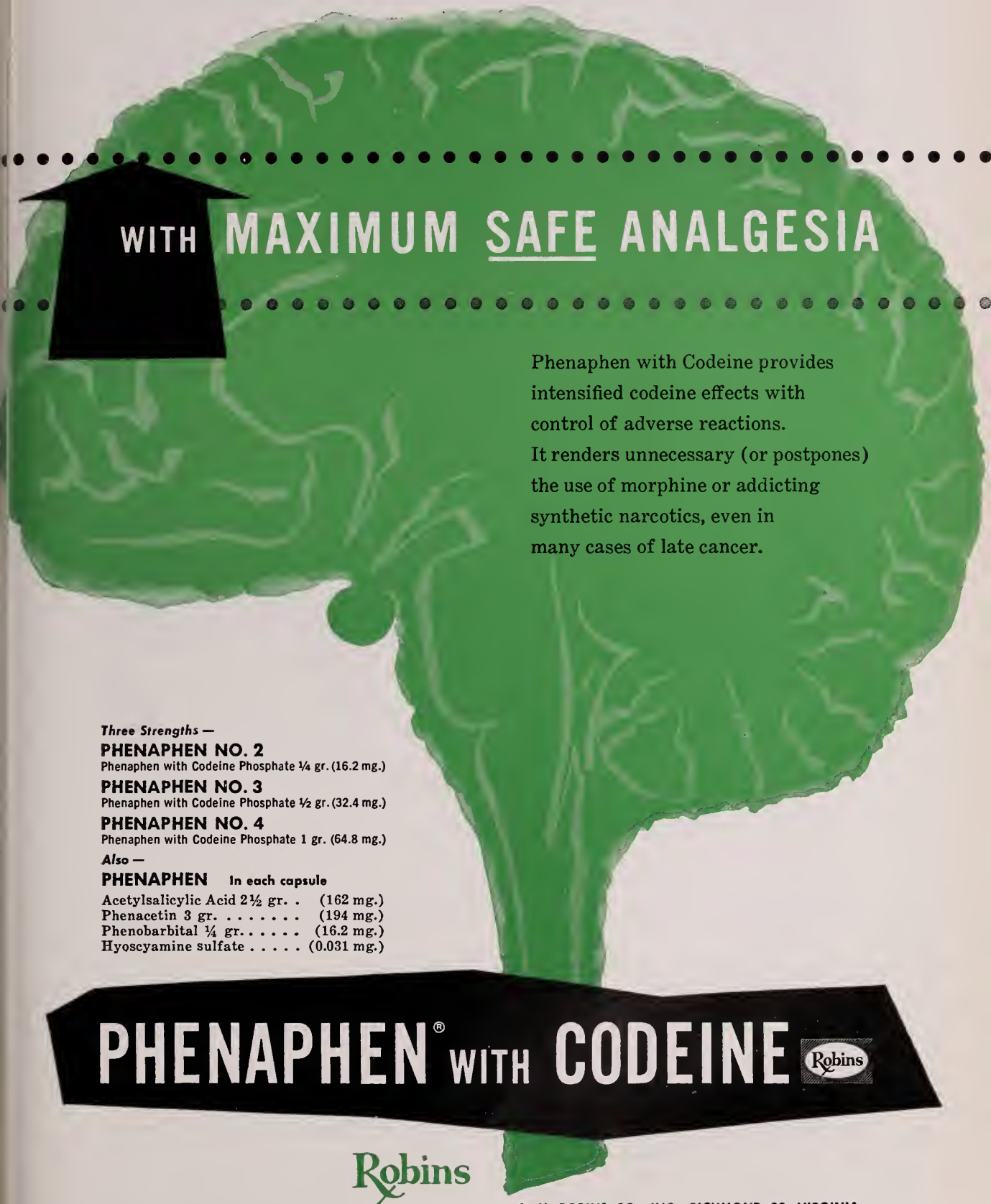


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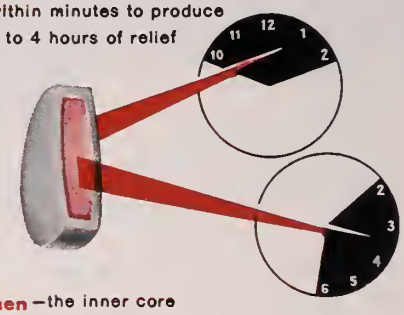
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TO ACCELERATE THE RECOVERY PROCESS

Established Efficacy and Safety: For five years VARIDASE, in parenteral form, has been used with success in many thousands of cases. Its ability to control inflammation, swelling and associated pain, aid penetration of antibiotics, and hasten healing has been demonstrated in such conditions as severe trauma, infected ulcerations, and following extensive surgery.

Now, Parenteral Effectiveness . . . Simple Buccal Route: New VARIDASE Buccal Tablets give your patients the benefits of systemic VARIDASE therapy without the inconvenience of repeated injections. Absorbed through the buccal mucosa in fully effective amounts, VARIDASE Buccal Tablets may be used as practical adjunctive therapy in your practice within these broad classifications:

Inflammation and edema associated with: trauma and infection • cellulitis • abscess • hematoma • thrombophlebitis • sinusitis • uveitis • chronic bronchitis • leg ulcer • chronic bronchiectasis.

Each VARIDASE Buccal Tablet contains 10,000 Units Streptokinase and 2,500 Units Streptodornase.

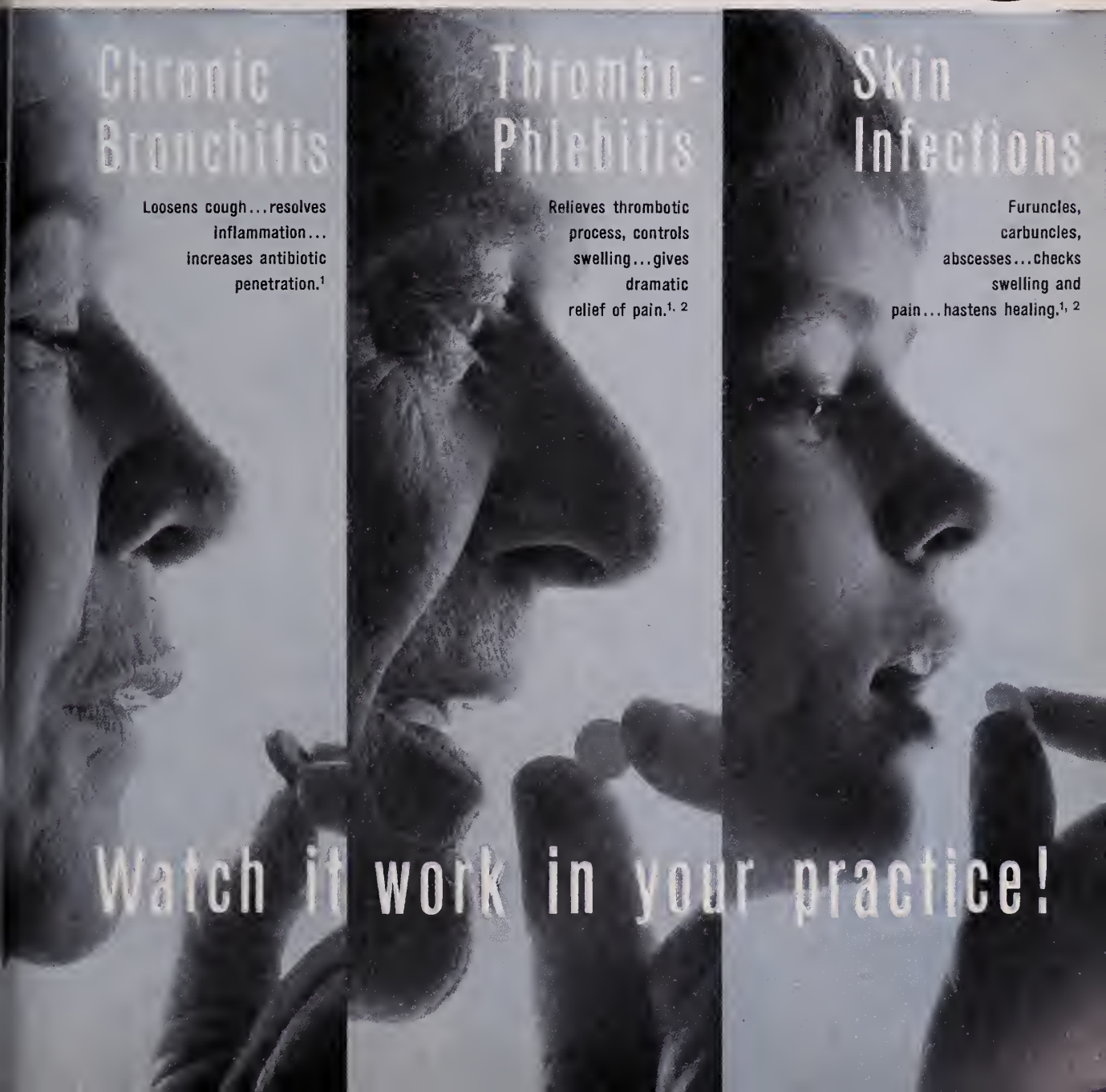
Administration: VARIDASE Buccal Tablets should be retained in the buccal pouch until dissolved. For maximum absorption patient should delay swallowing saliva.

Dosage: One tablet four times daily for a minimum of three days. When infection is present, VARIDASE Buccal Tablets should be given in conjunction with an antibiotic such as ACHROMYCIN* V Tetracycline and Citric Acid.

Available in bottles of 24.

*Reg. U. S. Pat. Off.

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York



They all went to the doctor...

I was too much

AMPLUS®

for sound obesity management
dextro-amphetamine plus vitamins and minerals

I was too little

STIMAVITE®

stimulates appetite and growth
vitamins B_1, B_6, B_{12}, C and L-lysine

I was simply two

OBRON®

a nutritional buildup for the OB patient

OBRON® HEMATINIC

when anemia complicates pregnancy



And I was getting brittle

NEOBON®

5-factor geriatric formula
hormonal, hematinic and nutritional support

ROETINIC®

one capsule a day, for all treatable anemias

HEPTUNA® PLUS

when more than a hematinic is indicated

With my anemia, I could never make it up that high



(*Prescription information on request*)

...and he solved their problems with a nutrition product from

ROERIG

New York 17, New York
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being



Results with "... antacid therapy with DAA are essentially the same as ... with potent anticholinergic drugs."

Alglyn®

Dihydroxy aluminum aminoacetate, N.N.R.

In recent years, a number of new synthetic anticholinergic drugs with numerous and varying side effects have been investigated for treatment of peptic ulcer. However, a double-blind study conducted recently by Cayer et al suggests that the use of such anticholinergic drugs is seldom necessary. The authors concluded that "The percentage of 'good to excellent' results obtained in patients on continuous long-term antacid therapy with DAA (74%) is essentially the same as that previously noted in ulcer patients treated under similar conditions with potent anticholinergic drugs alone."

The authors' choice of dihydroxy aluminum aminoacetate (DAA) was based on the fact that "the tablet form of DAA (is) more active than a variety of straight aluminum hydroxide magmas." They further commented that "Because of the convenience of tablet medication as compared with the liquid gel—a convenience which in the use of other tablets is gained at the expense of therapeutic effectiveness—dihydroxy aluminum aminoacetate was used exclusively."

ALGLYN (dihydroxy aluminum aminoacetate) Tablets are supplied in bottles of 100 tablets (0.5 Gm. per tablet).

BRAYTEN PHARMACEUTICAL COMPANY • *Chattanooga 9, Tennessee*

Faster rehabilitation in

Joint inflammation and muscle spasm are the two elements most responsible for disability in rheumatic-arthritic disorders—and MEPROLONE is the one agent that treats both.

MEPROLONE suppresses the inflammatory process and simultaneously relieves aching and stiffness caused by muscle spasm, to provide greater therapeutic benefits and a shorter rehabilitation period than any single antirheumatic-antiarthritic agent.

MEPROLONE-2 is indicated in cases of severe involvement, yet often leads to a reduction of steroid dosage because of its muscle-relaxant action. When involvement is only moderately severe or mild, MEPROLONE-1 may be indicated.

SUPPLIED: Multiple Compressed Tablets in three formulas: MEPROLONE-2—2.0 mg. prednisolone, 200 mg. meprobamate and 200 mg. dried aluminum hydroxide gel (bottles of 100). MEPROLONE-1 supplies 1.0 mg. prednisolone in the same formula as MEPROLONE-2 (bottles of 100). MEPROLONE-5—5.0 mg. prednisolone, 400 mg. meprobamate and 200 mg. dried aluminum hydroxide gel (bottles of 30).

a

Because muscles move joints, both muscle spasm and joint inflammation must be considered in treating the rheumatic-arthritic patient . . .



MERCK SHARP & DOHME Division of MERCK & CO., INC., Philadelphia 1, Pa.

Rheumatoid Arthritis

le compressed tablets

MEPROLONE®

RST MEPROBAMATE-PREDNISOLONE THERAPY



b

MEPROLONE is the one antirheumatic-antiarthritic that exerts a simultaneous action to relax muscles in spasm and to suppress joint inflammation . . .

c

Therefore, MEPROLONE does more than any single agent to help the physician shorten the time between disability and employability.



EPROLONE is a trade-mark of Merck & Co., Inc.

"Unsaturated Fats and Serum Cholesterol"

...a review of the latest Concepts and Results of Current Research

Now ready for distribution to physicians as a special service by Corn Products Refining Company, this book supplements and supersedes the 1957 monograph "Vegetable Oils in Nutrition" and provides a broader coverage of this important subject.

This new book is the most up-to-date annotated bibliography on current research pertaining to:

1. The origin and behavior of cholesterol in the human body;
2. The effect of different dietary fats on serum cholesterol levels;
3. The nature of the active components in vegetable oils;
4. Suggestions for practical diets.

As a regular part of daily meals Mazola® Corn Oil can be used for control of serum cholesterol levels

MAZOLA CORN OIL, a natural food and a superior salad and cooking oil, used as part of the daily diet, can be helpful in the control of serum cholesterol levels.

Extensive clinical findings now show that serum cholesterol levels tend to be lower when an adequate amount of MAZOLA CORN OIL is part of the daily meals... high levels are lowered, normal levels remain normal.

MAZOLA...the only readily available vegetable oil made from golden corn oil... is rich in the important unsaturated fatty acids. 85% of all the fatty acids in MAZOLA are unsaturated and 56% of the fatty acid content is linoleic.

As a result, MAZOLA CORN OIL is unusually well suited for helping achieve dietary adjustments commonly recommended by authorities on nutrition—that from one-third to one-half of the total fat in-take should be of the unsaturated type when serum cholesterol control is a problem.

Being a natural food, MAZOLA CORN OIL can be included as part of the every day meals—simply and without disturbing the patient's usual eating habits.

Each Tablespoonful of Mazola* Corn Oil Provides Approximately 126 Calories—and:

Linoleic Acid	7.4 Gm.
Sitosterols	130 mg.
Natural Tocopherols	15 mg.

Typical Amounts Per Diet

For a 3600 calorie diet — 3 tablespoonsful

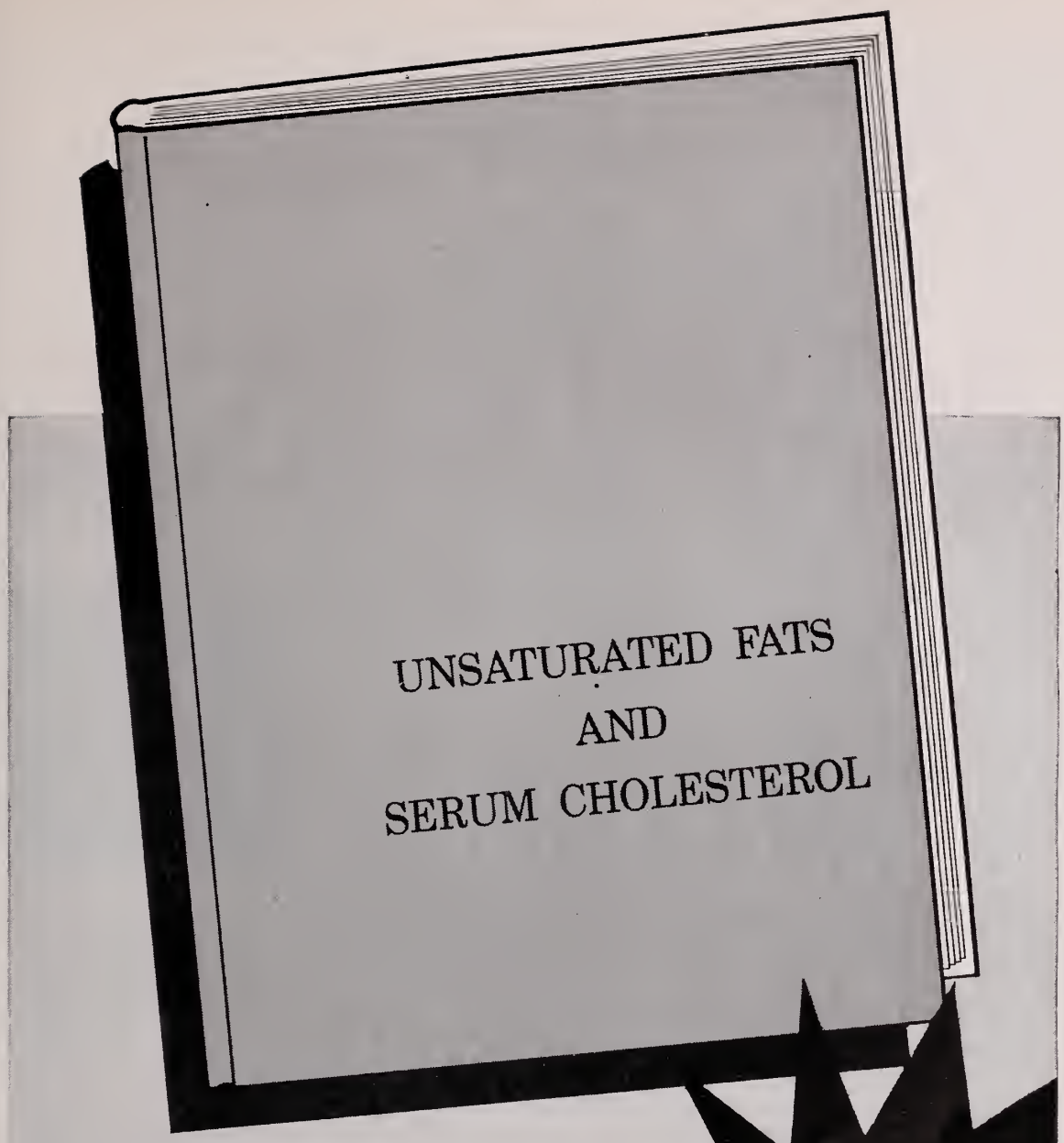
For a 3000 calorie diet — 2.5 tablespoonsful

For a 2000 calorie diet — 1.5 tablespoonsful

*Reg. U. S. Pat. Off.



CORN PRODUCTS REFINING COMPANY



USE THIS COUPON *for your convenience in ordering:*

Medical Department
Corn Products Refining Company
17 Battery Place, New York 4, New York

Please send me a free copy of your latest reference, "Unsaturated Fats and Serum Cholesterol."

NAME_____

ADDRESS_____

CITY_____ ZONE_____ STATE_____

NEW BOOK!
Just off the press . . . send now for your FREE copy

Low Dosage KYNEX* for G.U. Infections

Sulfamethoxypyridazine Lederle



Unusual Antibacterial and Anti-infective Properties—More soluble in acid urine[1] . . . higher and better sustained plasma levels than any other known and useful antibacterial sulfonamide.[2]

Unprecedented Low Dosage—Less sulfa for the kidney to cope with . . . yet fully effective. A single daily dose of 0.5 to 1.0 Gm. maintains higher plasma levels than 4 to 6 Gm. daily of other sulfonamides—a notable asset in prolonged therapy.[2]

Dosage: The recommended adult dose is 1 Gm. (2 tablets) the first day, followed by 0.5 Gm. (1 tablet) every day thereafter, or 1 Gm. every other day for mild to moderate infections. In severe infections where prompt, high blood levels are indicated, the initial dose should be 2 Gm. followed by 0.5 Gm. every 24 hours.

KYNEX—WHEREVER SULFA THERAPY IS INDICATED

Tablets: Each tablet contains 0.5 Gm. (7½ grains) of sulfamethoxypyridazine. Bottles of 24 and 100 tablets.

Syrup: Each teaspoonful (5 cc.) of caramel-flavored syrup contains 250 mg. of sulfamethoxypyridazine. Bottle of 4 fl. oz.

references:

1 Grieble, H.G., and Jackson, G.G.: Prolonged Treatment of Urinary-Tract Infections with Sulfamethoxypyridazine. *New England J. Med.* 258:1-7, 1958

2. Editorial: *New England J. Med.* 258:48-49, 1958.

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

*Reg. U. S. Pat. Off.

NICOZOL w/Reserpine

for the aged patient

. . . when mental decline
is complicated by
marked agitation

NICOZOL w/Reserpine

helps reverse cerebral
deterioration . . . while it
stimulates body function . . .
and calms the emotions.

for a 3-way synergistic action . . .

Each tablet NICOZOL w/Reserpine contains:

Pentylenetetrazol	100 mg.	(cerebral stimulant & analeptic)
Niacin	50 mg.	(vasodilator)
Reserpine	0.25 mg.	(tranquilizer-sedative)

Clinically Established[1, 2]

In studies of 75 patients (average age—72), with typical mental and emotional symptoms together with alternate periods of depression and agitation, 87% showed gratifying response to NICOZOL w/RESERPINE.

"This therapy afforded relief of agitation . . . improved memory, behavior, sociability, appearance and tidiness. Symptoms of confusion, aggressiveness, hostility and disorientation also were relieved." Fewer side effects were noted.





AT HOME . . . NOT IN A HOME

". . . patients who otherwise would have required institutionalized care were managed at home . . . ."[2]

Prescribed early, NICOZOL w/RESERPINE may avoid "later commitment to nursing homes or state hospitals."[1, 2]

Write for professional samples and literature

DRUG Specialties INC.

DRUG SPECIALTIES, INC.

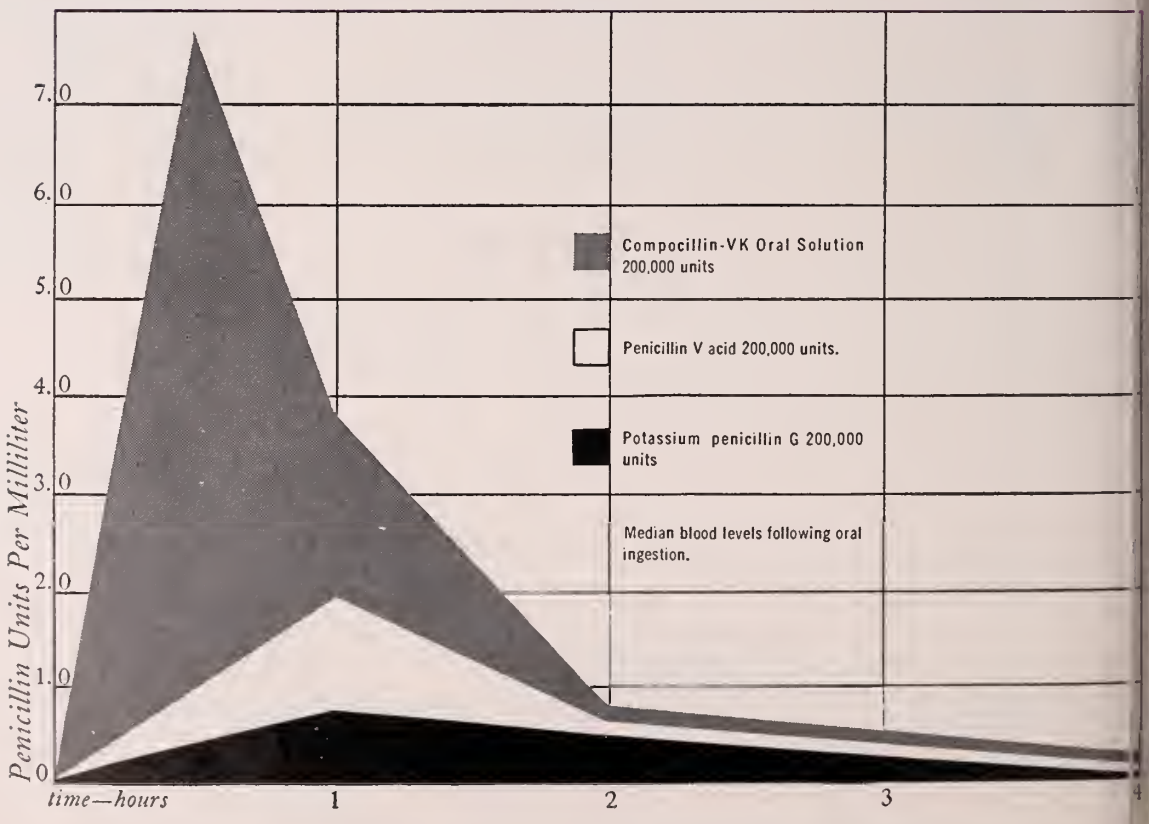
WINSTON-SALEM N. C.

1. Proctor, R. C.: Clin. Med. 6: 717 (June) 1957
2. Proctor, H. ., Bailey, W. H. and Morehouse, W. G.: J. Am. Geriatrics Soc. (April) 1958.



Now–from Abbott Laboratories

Good-tasting, cherry-flavored . .





a oral solution of potassium penicillin V



us the higher blood levels of potassium penicillin V



POTASSIUM PENICILLIN V

Compocillin®-VK

granules for oral solution

w, for oral administration, COMPOCILLIN-VK anules offer you a solution of potassium pen- llin V. Developed by Abbott Laboratories, granules are dry and easily reconstituted th water.

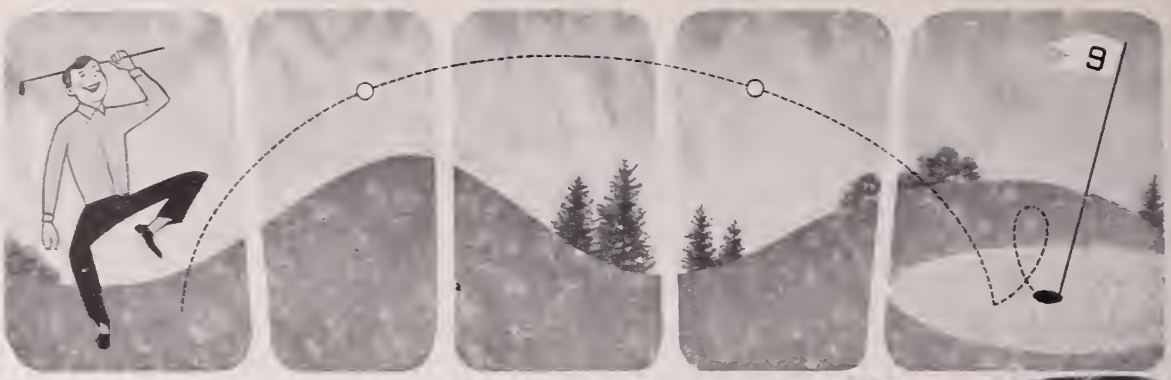
The clear, red solution has a fresh, cherry vor, is taste-tested and is well-accepted by tients. And they'll get those high potassium nicillin V blood levels (note chart).

COMPOCILLIN-VK is indicated for all infec- ns susceptible to oral penicillin therapy. Also, treating recurring rheumatic fever and in naging rheumatic carditis. COMPOCILLIN-VK ny be used in counteracting complications m severe viral attacks.

The initial recommended dose: In acute infections, the range is from 125 mg. (200,000 units) three times daily to 250 mg. (400,000 units) every four hours. For young children, the adult dose may be reduced in proportion to age and weight. For prophylactic use, 125 mg. (200,000 units) may be administered once or twice daily.

COMPOCILLIN-VK Granules for Oral Solution come in 40-cc. and 80-cc. bottles. Each 5-cc. teaspoon of the reconstituted solution represents 125 mg. (200,000 units) of potassium penicillin V. The dry granules stay stable under ordinary room temperatures. When reconstituted, the solution will remain potent for two weeks under refrigeration.

Abbott



LEAVES NOTHING TO BE DESIRED

HYCOMINE® Syrup

THE COMPLETE Rx FOR COUGH CONTROL

cough sedative / antihistamine / expectorant

- relieves cough and related symptoms in 15-20 minutes
- effective for 6 hours or longer • promotes expectoration
- rarely constipates • cherry-flavored

Each teaspoonful (5 cc.) contains:

Hycodan®		
Dihydrocodeinone Bitartrate (Warning: May be habit-forming)	5 mg.	6.5 mg.
Homatropine Methylbromide	1.5 mg.	
Pyrilamine Maleate		12.5 mg.
Ammonium Chloride		60 mg.
Sodium Citrate		85 mg.

Adult Dosage: one teaspoonful q. 6 h. May be habit-forming.
Federal law permits oral prescription.

Endo®

Literature on request

ENDO LABORATORIES
Richmond Hill 18, New York



U. S. Pat. 2,630,400

New Neo-Synephrine®

Compound

Cold Tablets

for "Syndromatic" Control of the Common Cold and Allergic Rhinitis

Neo-Synephrine now has three complementary compounds added to its own dependable, decongestive action for more complete control of the common cold syndrome.

The "syndromatic" action of Neo-Synephrine Compound Cold Tablets brings new and greater effectiveness to the treatment of the common cold syndrome.

protection... through the full range of common cold symptoms

Each tablet contains:

for **NASAL STUFFINESS, TIGHTNESS, RHINORRHEA**

NEO-SYNEPHRINE HCl 5 mg...... First choice in decongestants for its mild but durable action and excellent tolerance.

for **ACHES, CHILLS, FEVER**

ACETAMINOPHEN 150 mg. ..... Dependable analgesic and antipyretic

for **RHINORRHEA, ALLERGIC MANIFESTATIONS**

THENFADIL® HCl 7.5 mg. ..... Effective antihistaminic to relieve rhinorrhea and enhance mucosal resistance to allergic complications.

for **LASSITUDE, MALAISE, MENTAL DEPRESSION**

CAFFEINE 15 mg.

DOSE: ***Adults:*** 2 tablets three times daily.
Children 6 to 12 years: 1 tablet three times daily.

Bottles of 20 and 100 tablets.

Neo-Synephrine (brand of phenylephrine) and Thenfadil (brand of thenyldiamine), trademarks reg. U.S. Pat. Off.

Winthrop LABORATORIES · NEW YORK 18, N. Y.

- postoperatively
- in pregnancy when vomiting is persistent
- following neurosurgical diagnostic procedures
- in infections, intra-abdominal disease, and carcinomatosis
- after nitrogen mustard therapy

for nausea and vomiting

VESPRIN

Squibb Trifluprom azine

- provides prompt, potent, and long-lasting control
- capable of depressing the gag reflex
- effective in cases refractory to other potent antiemetic agents
- may be given intravenously, intramuscularly and orally
- no pain or irritation on injection

ANTIEMETIC DOSAGE:
Intravenous: 8 mg. average single dose
Dosage range 2-10 mg.
Intramuscular: 15 mg. average single dose
Dosage range 5-15 mg.
If subsequent parenteral dose is needed, one-half the original dose will usually suffice
Oral: 10-20 mg. initially; then 10 mg. t.i.d.

SUPPLY:
Parenteral solution – 1 cc. ampuls (20mg./cc.)
Oral tablets – 10 mg., 25 mg., 50 mg., in bottles of 50 and 500

SQUIBB *Squibb Quality – The Priceless Ingredient*

"VESPRIN" ® IS A SQUIBB TRADEMARK

new

Tao*

PRONOUNCED TAY-O

(brand of triacetyloleandomycin with glucosamine)

Capsules / Oral Suspension

designed for effective control of common gram-positive infections

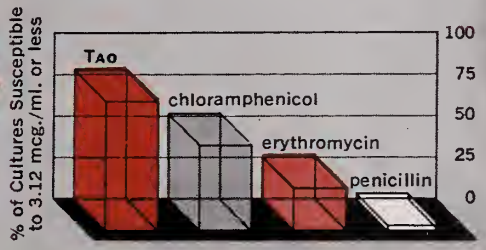
effective . . .

CLINICAL RESULTS	adults	children	all Staph infections
Cured	172 (80%)	148 (89%)	71 (88%)
Improved	28 (13%)	8 (5%)	7 (9%)
Failure	17 (7%)	11 (6%)	3 (3%)

Types of infecting organisms: The majority of identified etiologic microorganisms were Staph. aureus and Staph. albus. Tao has its greatest usefulness against organisms such as: staphylococci (including strains resistant to other antibiotics), streptococci (beta-hemolytic strains, alpha-hemolytic strains and enterococci), pneumococci, gonococci, Hemophilus influenzae.

even against resistant staph[1,2] . . .

Per cent of "antibiotic-resistant" epidemic staphylococci cultures susceptible to Tao, erythromycin, penicillin and chloramphenicol.[1]



well tolerated . . .

REACTIONS:

(a) adults	(b) children
Total—9.2% (20 out of 217)	Total—0.6% (1 out of 167)
Skin rash—1.4% (3 out of 217)	Skin rash—none
Gastrointestinal—7.8% (17 out of 217)	Gastrointestinal—0.6% (1 out of 167)

There was complete freedom from adverse reactions in 94.5% of all patients. Side effects in the other 5.5% were usually mild and seldom required discontinuance of therapy.

plus . . . stability in gastric acid • rapid, high and sustained blood levels • high urinary concentrations • outstanding palatability in a liquid preparation.

Dosage and Administration: Dosage varies according to the severity of the infection. For adults, the average dose is 250 mg. q.i.d.; to 500 mg. q.i.d. in more severe infections. For children 8 months to 8 years of age, a daily dose of approximately 30 mg./Kg. body weight in divided doses has been found effective. Since Tao is therapeutically stable in gastric acid, it may be administered at any time, without regard to meals.

Supplied: Tao Capsules—250 mg. and 125 mg.; bottles of 60. Tao for Oral Suspension—1.5 Gm.; 125 mg. per teaspoonful (5 cc.) when reconstituted; unusually palatable cherry flavor; 2 oz. bottle.

References: 1. English, A. R., and Fink, F. C.: Antibiotics & Chemother. (Aug.) 1958. 2. English, A. R., and McBride, T. J.: Antibiotics & Chemother. (Aug.) 1958. 3. Wennersten, J. R.: Antibiotic Med. & Clin. Therapy (Aug.) 1958. 4. Celmer, W. D., et al.: Antibiotics Annual 1957-1958, New York, Medical Encyclopedia, Inc., 1958, p. 476.

℞ PFIZER NEW YORK 17, N. Y.

Division, Chas. Pfizer & Co., Inc. SCIENCE FOR THE WORLD'S WELL-BEING

*TRADEMARK



new 3-way build-up for the under par child...

Improve appetite and energy
with ample amounts of vitamins—B_1, B_6, B_{12}.

strengthen bodies with needed protein
Through the action of l-Lysine, cereal and other low-grade protein foods are up-graded to maximum growth potential.

discourage nutritional anemia
with iron in the well-tolerated form of ferric pyrophosphate...plus sorbitol for enhanced absorption of both iron and B_{12}.

new

INCREMIN*

Lysine-Vitamins

WITH IRON SYRUP

delicious cherry flavor— no unpleasant aftertaste

Average dosage is 1 teaspoonful daily. Available in bottles of 4 and 16 fl. oz.

Each teaspoonful (5 cc.) contains:

l-Lysine HCl	300 mg.
Vitamin B_{12} Crystalline	25 mcgm.
Thiamine HCl (B_1)	10 mg.
Pyridoxine HCl (B_6)	5 mg.
Ferric Pyrophosphate (Soluble)	250 mg.
Iron (as Ferric Pyrophosphate)	30 mg.
Sorbitol	3.5 Gm.

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York Lederle

*Reg. U. S. Pat. Off.



Bed of Digitalis purpurea
with Campanula (Canterbury Bells) in foreground

Not far from here are manufactured
from the powdered leaf
Pil. Digitalis (Davies, Rose)
0.1 Gram (1½ grains) or 1 U.S.P. Digitalis Unit.
They are physiologically standardized,
with an expiration date on each package.
Being Digitalis in its completeness,
this preparation comprises the
entire therapeutic value of the drug.
It provides the physician with a safe and effective
means of digitalizing the cardiac patient
and of maintaining the necessary saturation.
Security lies in prescribing the
"original bottle of 35 pills, Davies, Rose."

Clinical samples and literature sent to physicians on request

Davies, Rose & Co., Ltd. Boston 18, Mass.

D 27

For Speedier Return to Normal Nutrition

Meat...

in Inflammatory Conditions of the Colon

The physiologic depletion accompanying acute infectious and inflammatory conditions of the bowel makes replacement therapy the key to nutritional rehabilitation.

In addition to the loss of important electrolytes, such as potassium and sodium, large amounts of protein are lost in the fluid, blood and exudate from the bowel. In the acute state of such affections, utilization of what protein can be ingested is further affected by increased protein catabolism and by impairment of certain hepatic functions.

Dietary rehabilitation must be carried out within the framework of a diet restricted in fiber and in irritating substances. Foods allowed must be easily digested and appetizingly and attractively prepared to encourage eating.

Tender lean meats—finely ground in the initial diet and later served in a wide variety of appealing ways—can be an important source of the protein and minerals required by the convalescing patient.

Meat fits admirably into the requirements of the permitted diet not only because of its taste, digestibility, and physical characteristics, but also because of its contribution of high quality protein, the minerals potassium, iron, phosphorous, sodium, and magnesium, and all the known B vitamins.

The nutritional statements made in this advertisement have been reviewed by the Council on Foods and Nutrition of the American Medical Association and found consistent with current authoritative medical opinion.

American Meat Institute
Main Office, Chicago...Members Throughout the United States

LEDERLE LABORATORIES

Lederle

A Division of AMERICAN CYANAMID COMPANY

INTEROFFICE CORRESPONDENCE

Pearl River, N. Y. 7/18/58

OFFICE DATE

TO: Advertising Department COPY TO:

ATT'N: J. D. Roberts

FROM: C. K. Howe, Sales

Jim --

Here's a question a number of our detail men have tossed at me. Why doesn't Lederle's advertising for ACHROMYCIN V Tetracycline play up higher, faster blood levels the way so many of our competitors do?

As you know, new laboratory studies show pretty conclusively that ACHROMYCIN V is unexcelled in this department.

How come we haven't turned on the heat in our ads?

C. K. Howe

CKH:ls

LEDERLE LABORATORIES

A Division of AMERICAN CYANAMID COMPANY

INTEROFFICE CORRESPONDENCE

Noted CKH

Pearl River, N. Y. 7/21/58

OFFICE DATE

TO: Sales Department COPY TO:

ATT'N: C. K. Howe

FROM: J. D. Roberts

Charlie --

Sure ACHROMYCIN V Tetracycline blood levels are unsurpassed in the latest laboratory study. But actually how significant are any of these blood levels, clinically? It's really a matter of micromilligrams and fractional minutes! Let's not put Lederle in the position of giving this sort of evidence more emphasis than it deserves.

I think our job is to let doctors know that Lederle Research developed ACHROMYCIN V to give improved results under actual clinical conditions . . . to get a higher percentage of antibiotic to the tissues.

The fact that ACHROMYCIN V is the most widely prescribed broad-spectrum antibiotic ought to be pretty good evidence that physicians are consistently getting these results.

If your detail men will give doctors the complete story on antibiotics, I think ACHROMYCIN V prescriptions will continue to climb without any fancy blood level advertising.

J. D. Roberts

JDR:ep

NONSYSTEMIC ANTACID

NO INTERFERENCE WITH PEPSIN ACTION IN STOMACH

DOES NOT ALTER PH OF BLOOD

NO SECONDARY ACID RISE

DOES NOT ALTER PH OF STOMACH

SOOTHING, PROTECTIVE COATING

NON-CONSTIPATING

DOES NOT CAUSE DIARRHEA

CANNOT PRODUCE AN ALKALOSIS

The palatable approach to ANTACID ACTION



FORMULA:

Each teaspoonful (5 cc.) contains:

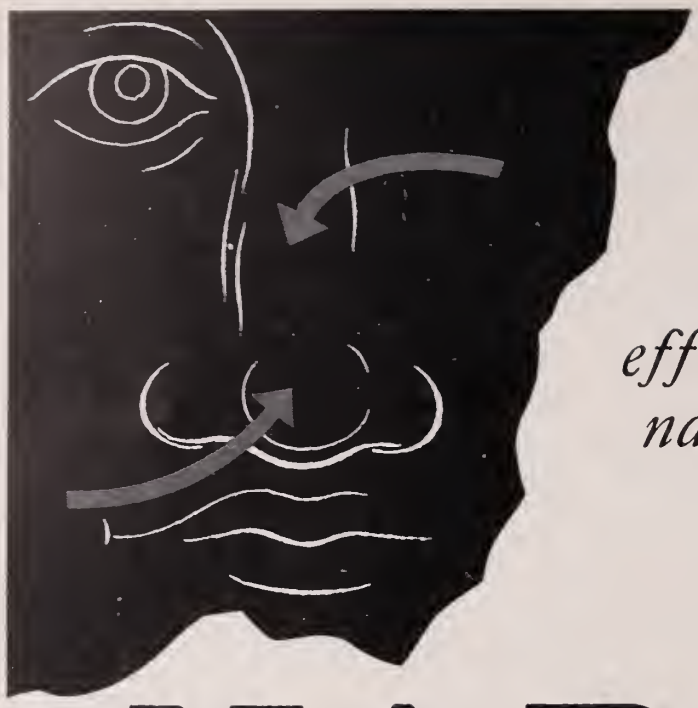
Sodium Carboxymethylcellulose gel	3.0 GR.
Magnesium Trisilicate	7.5 GR.

(Special air floated has twice the absorptive power as regular U. S. P.)

TRIMAGMA

JONES and VAUGHAN, INC., RICHMOND 26, VIRGINIA

J. and V.



a more effective nasal decongestant

NADEC®
TABLETS

NADEC®
TDC (TIMED DISINTEGRATION CAPSULES)

for prompt, more complete, day-and-night relief in the ***common cold nasal allergies sinusitis***

Realistic dosage of the potent vasoconstrictor, phenylephrine hydrochloride, combined with the dependable antihistamine, pyrilamine maleate... for mutually enhancing, oral efficacy in clearing stuffy nose, combatting allergic turgidity, draining clogged sinuses, relieving postnasal drip.

patients breathe easier, feel so much more comfortable

NADEC provides	in each tablet	in each TDC*
Phenylephrine HCl U.S.P.	10 mg.	15 mg.
Pyrilamine Maleate U.S.P.	25 mg.	45 mg.

*Timed Disintegration Capsule affords up to 8 hours relief.

DOSAGE: 1 to 2 tablets p.c. Children 1 tablet, p.c. or 1 capsule b.i.d., 12 hours apart (adults)

SUPPLIED: Bottles of 100 green tablets or orange T.D. Capsules

REFER TO PDR
PAGE 805

Sample and literature from...

THE TILDEN COMPANY • New Lebanon, N. Y.
Oldest Manufacturing Pharmaceutical House in America • Founded 1824

you and your patient can see the improvement

with

METIMYD®

Ophthalmic Suspension
prednisolone, 0.5%,
plus sulfacetamide sodium, 10%
Ointment with Neomycin, 0.25%

in blepharitis,
conjunctivitis,
episcleritis,
keratitis,
meibomitis
and other
external eye
conditions



- prednisolone effectively checks inflammation and allergy
- sulfacetamide sodium, with its wide-spectrum antibacterial range, controls infections caused by common eye pathogens
- addition of neomycin sulfate to prednisolone and sulfacetamide sodium in METIMYD Ointment broadens the antibacterial spectrum; the ointment also assures sustained therapeutic action during the night

SCHERING CORPORATION · BLOOMFIELD, NEW JERSEY

Schering

MM-J-178



Provides therapeutic quantities of all known hematinic factors

Potent 'Trinsicon' offers complete and convenient anemia therapy plus maximum absorption and tolerance. Just two Pulvules 'Trinsicon' daily produce a standard response in the average uncomplicated case of pernicious anemia (and related megaloblastic anemias) and provide at least an average dose of iron for hypochromic anemias, including nutritional deficiency types. The intrinsic factor in the 'Trinsicon' formula enhances (does not inhibit) vitamin B_{12} absorption.

Available in bottles of 60 and 500 at pharmacies everywhere.

*'Trinsicon' (Hematinic Concentrate with Intrinsic Factor, Lilly)

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Guest Editorial....

"Cancer of the Head and Neck—A Plea For Its Progressive Management"

"THOUGH SIGNAL ADVANCES have been made recently in many surgical problems, the treatment of head and neck cancer, it would seem, has neither received the attention nor kept the pace of progress in other fields. These unhappy cases are often regarded as specters in the clinic. The operative treatment is hampered by tradition and conventionality, and the tragic ending of so large a proportion of these cases has held back lay and even professional confidence."[1]

These well-chosen words, from the pen of one of the fathers of head and neck surgery—George Crile, Senior—still apply today in many areas of our land. When written over fifty years ago, they indicated a nation-wide situation. Following his masterful systematization of the surgical treatment of squamous carcinomas of the oropharynx, irradiation entered the scene and the operative management of such lesions was relegated to obscurity. However, the inability of x-ray to control cervical metastases and the complications of surgery following unsuccessful irradiation resulted in a rebirth of surgery in certain medical centers.

With the advent of blood transfusions, antibiotics, and modern anesthesiology, tremendous strides have been made of late in the handling of these neoplasms arising in areas where a veritable cross-road of specialties exists. Perhaps this latter phenomenon of limiting specialization has been the most recent deterrent to progress in certain geographical locations, resulting in problems not unlike those faced by Crile. The general surgeon, the plastic surgeon, and the otolaryngologist have each carried forward the operative fight against cancer in the head and neck as far as their training has permitted. Obviously, the lack of complete management by one specialty and the absence of one over-all plan often leads to a hodge-podge of methods and partial procedures which even today fail to avert the "tragic ending" described by Crile.

Primary squamus carcinomas of the oro-laryngo-pharynx are often cured with modern irradiation methods and this modality of treatment is, in some instances, the treatment of choice, but the surgeon must be prepared to extirpate such lesions when irradiation fails and to radically excise metastases as soon as they appear. This same irradiation method is frequently utilized as "a way out" by the surgeon unfamiliar with

radical operative technics. Thus, the radiotherapist is often pitted against lesions, amenable to radical combined procedures, but impossible to control with external irradiation alone.

The term "mutilating surgery" and "unnecessarily radical operations" are often used in rebuttal when systematized operative methods of therapy are suggested. The facts that the will to live in spite of deformities is ever present in those afflicted with head and neck cancer and that modern surgical technics are aimed at ablation of cancer as well as restoration of reasonably normal function makes these pessimistic arguments ridiculous both to the patient and the surgeon trained in this field. Obviously, attempted resections of lesions which have become incurable by involvement of the base of the skull or by spread beyond the scope of surgery may well be criticized by the lay public and physicians generally.

Recent progress in head and neck surgery has consisted of the development of technics of earlier diagnosis, more extensive combined procedures and hitherto unknown reconstructive modalities, and exacting methods of post-operative care. Aspiration biopsy, a successful diagnostic tool of long standing, has now come into its own and progressive pathologists are using needle biopsy material for definitive diagnosis in more and more medical centers. This diagnostic method has all but replaced excision node biopsy of the neck, a procedure which often contaminates the field for radical dissection and makes subsequent operative management difficult. Mirror examination of the laryngo-pharynx has become a routine procedure in the examination of all patients with tumors in this region. Single-stage bilateral neck dissections and skin graft replacements of mucosal defects are being employed with increasing frequency. Modern systemic supportive measures and detailed wound care plus the increasing knowledge of laryngo-tracheal and pulmonary physiology have not only prevented the serious post-operative complications of the past but have allowed surgeons to carry out newer and more extensive procedures with comparative safety.

These "signal advances" have remained for a great part in the very medical centers where they were developed. "Unhappy cases" and "tragic results" still populate our land and will continue to do so unless the many difficulties outlined are remedied.

The only real solution to this situation lies in surgical training aimed at complete management of lesions crossing the borders of specialization and including the teaching of the natural history of cancer and its diagnosis and the basic concepts of irradiation therapy. By these means alone will confidence be built up in the lay and professional minds regarding the radical philosophy of treatment in cancers of the head and neck. By such means, also, will the prophetic words of Crile, one of the greatest surgeons of the modern era, be rightfully answered.

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William R. Nelson, M.D.

Clinical Experiences with the Anticoagulant Warfarin Sodium ("Coumadin Sodium")

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ANTICOAGULANT THERAPY has been used extensively over the past 10 to 15 years for the treatment of a variety of thrombo-embolic disorders. Various anticoagulant agents have been used, none of them entirely satisfactory. Dicumarol, the most popular one, cannot be given parenterally, has a long latent period before effects become manifest and is unpredictable at times. Heparin, another popular agent, is expensive and can be given only by the parenteral route. Ethyl biscoumacetate ("Tromexan") acts promptly, but is short in action, the dose is unpredictable and control is difficult to maintain[1]. Phenylindandione ("Hedulin") has a long latent period and has induced toxic side reactions other than hemorrhage[2].

A more recently introduced anticoagulant agent is Warfarin ("Coumadin") Sodium, a synthetic hypothrombinemia-inducing agent developed by Link and his associates[3]. It belongs to the coumarin group of drugs and has the chemical name 3-(a-phenyl-b-acetylethyl)-4-hydroxy-coumarin. The generic name is Warfarin. The sodium salt of this preparation is readily water soluble and is suitable for oral or intravenous use. It is marketed under the brand name of "Coumadin Sodium".* Clinical studies on this drug have been reported by Shapiro[4,5], Wolff and his associates[6], Clatanoff and his associates[7,8], Pollock[1,9], and Nicholson and Leavitt[10]. All of these reports have indicated that Warfarin Sodium is an effective hypoprothrombinemia-inducing agent by either the oral or intravenous route. It has a fairly rapid onset of action with therapeutic levels of prothrombin activity attained in 18-30 hours, about the same whether given orally or intravenously. The dose is essentially the same for either route, indicating complete absorption when given orally. All reports emphasize the predictability of dosage and the ease with which a smooth maintenance is accomplished. There have been no reported side effects, other than bleeding from excessive dosage, which is merely an expression of its pharmacological action. This has been shown to be rapidly and effectively counteracted by Vitamin K_1. The suggested initial dose is 1 mgm. per kilogram body weight, but Pollock[1] found no direct correlation between body weight and the size of the initial or maintenance dose.

The original oral preparations were made available in 25 mgm. quarter-scored tablets, but more recently 10 mgm. scored tablets have become available. Hence, some of the data presented have dosages in multiples of 6.25 mgms., while other data have dosages in multiples of 5 mgms.

Our experience with Warfarin ("Coumadin") Sodium consists of its use in 80 patients treated over the past two years at the McGuire Veterans Administration Hospital and the Medical College of Virginia Hospitals. In five patients, the drug was used on two occasions, making a total of 85 instances of Coumadin therapy. This treatment was carried out for a variety of thrombo-embolic disorders as shown in Table I. Table II indicates the various

TABLE I

CONDITIONS TREATED WITH COUMADIN

Coronary Disease		66
Acute Myocardial Infarction	52	
"Intermediate Coronary Syndrome"	14	
Thrombophlebitis		8
Without Embolism	4	
With Embolism	4	
Auricular Fibrillation with Embolism		7
Cerebral Thombosis		2
Aortic Thrombosis		1
"Myocarditis" (Prophylactic)		1
TOTAL		85

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Table II

Methods of Administration			
Initial Anticoagulation			73
Coumadin alone		43	
Orally	38		
Intravenously	5		
Coumadin and Heparin		30	
Continuation of Anticoagulation			12
Prior control satisfactory		8	
Prior control unsatisfactory		4	

methods by which Coumadin was used. The concomitant use of Heparin in initial anticoagulation was based on the assumption that, if anticoagulation is of value, rapid anticoagulation (within a few hours) may be desirable in certain cases. Since there is an 18-24 hour lag between the administration of Coumadin and the onset of therapeutic effects, Heparin will achieve some measure of anticoagulation during this latent period.

The hypoprothrombinemic effect of Coumadin was measured by the Quick one-stage method and reported as per cent prothrombin activity. We consider the therapeutic range to be between 25% and 15%, which corresponds to a time of approximately 20 to 30 seconds using a control of 11-13 seconds.

It should be emphasized that this particular presentation is not concerned with the pros and cons of anticoagulant therapy, nor with the therapeutic results of such therapy. We are merely presenting the data on Coumadin as an anticoagulant agent, apart from any discussion of the indications for its use or the ultimate benefit to the patient.

We found considerable variation in the sensitivity of patients to the hypoprothrombinemia effects of the initial ("priming") dose of Coumadin. Some patients were quite sensitive, while a few were quite resistant. The priming dose varied from 25 to 75 mgms. as single doses, and 50 to 100 mgms. as double doses orally, and from 50 to 60 mgms. as single doses intravenously. There was little correlation between the dose and the patient's weight and the rapidity or degree of therapeutic response. As a matter of fact, there were instances in patients of approximately the same size, where doses of 75 mgms. just barely achieved therapeutic responses, while doses of 50 mgms. resulted in prothrombin activity below therapeutic levels.

Figure 1 is a graph of the initial anticoagulant response of six patients to a single dose of 60 mgms. of Coumadin orally. The weight of these patients varied from 63 to 85 kilograms, with no distinct individual correlation of body weight to the therapeutic response. Figure 2 illustrates the initial anti-

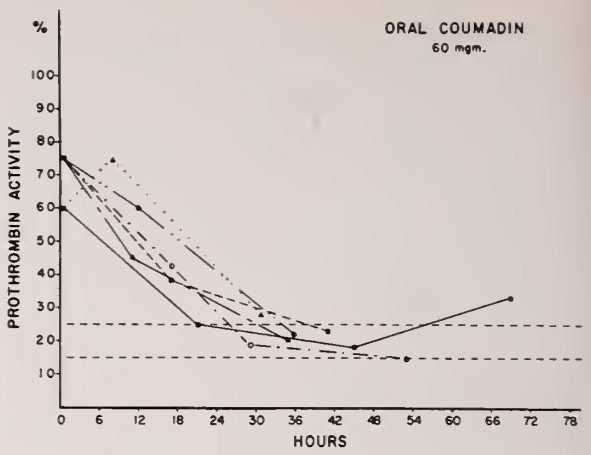


Figure 1

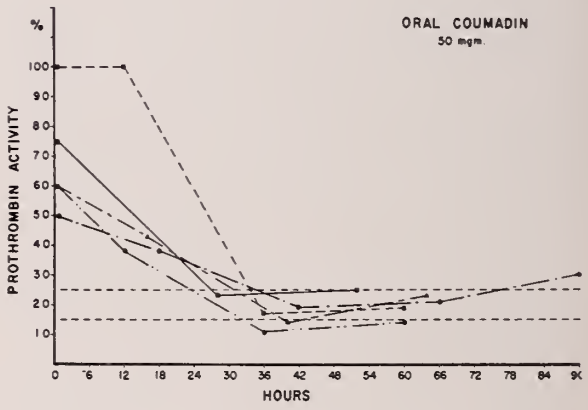


Figure 2

coagulant response of five patients to a single 50 mgm. dose of Coumadin orally. The weight in these patients varied from 42 to 80 kilograms. Again, there was no individual correlation between weight and response, although as a group the average weight was less and the response tended to be lower than the group receiving the 60 mgm. dose. Figure 3 illustrates the anticcagulant response in four patients

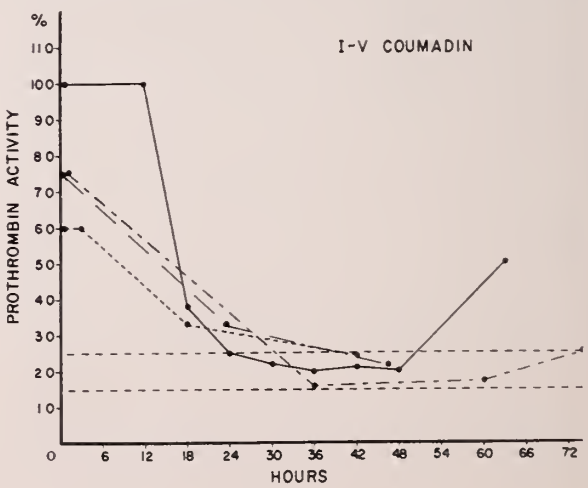


Figure 3

receiving a single intravenous dose of Coumadin. The dose varied from 45 to 65 mgms. and the patients' weights varied from 62 to 100 kilograms. As with oral administration, there was no close correlation between the patients' weights and dose with the response. The dose and response intravenously were about comparable to those of oral administration. This lack of correlation between dosage and weight was found by Pollock[1]. From a practical point, we do not believe that the initial dose needs to be related precisely to body weight, as has been advocated. This is of some importance because many of these patients are quite ill and it may be impractical to weigh them.

In some instances a double priming dose of Coumadin was given. By this method, an initial dose of 50 to 75 mgms. was given on the first day and a subsequent dose (10 to 25 mgms.) given the second day. This second dose was based to a large extent on the level of prothrombin activity determined on that day. This method did not achieve therapeutic levels any sooner than did a single priming dose, as shown in Figure 4 and, for the most

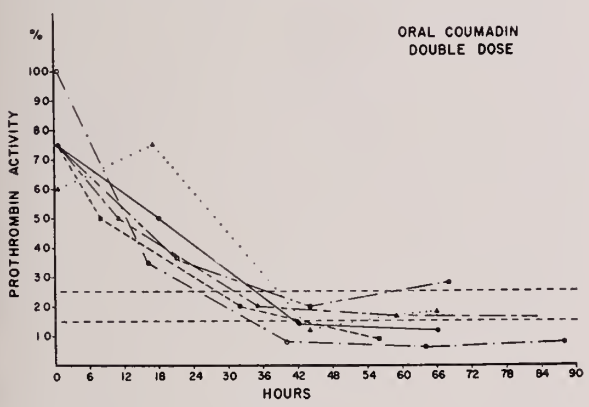


Figure 4

part, produced hypoprothrombinemia levels below the therapeutic range. On the whole, this method would appear to be an undesirable one. The fallacy in this method is that reliance is placed on the level of prothrombin activity determined the second day as an indication of the patient's sensitivity to the drug. Many of these determinations were made within the 12 to 18 hour period following initial administration of the drug, and in this period of time, as shown in Figures 1 to 4, there may be little if any hypoprothrombinemic effect. The determination of prothrombin activity during this period may give little indication of the patient's sensitivity to the drug or the ultimate anticcagulant effect of the initial dose. After this period, there may be a rapid and pronounced effect and this, combined with the effects of the second dose, can produce dangerously low levels of prothrombin activity the third and even the fourth day. While there were no instances where the low levels of prothrombin activity from double priming doses alone caused obvious bleeding, they did give rise to some concern. In some of these situations, it was deemed advisable to administer Vitamin K_1 as a precautionary measure and this served to retard or hamper the continuation of effective anticoagulation, particularly if large doses were given intravenously. Smaller doses (5 to 10 mgms.) of Vitamin K_1 given orally were found to raise the level of prothrombin activity within a few hours to therapeutic range without seriously altering the course of anticoagulant therapy.

While this discussion is not concerned primarily with Heparin, some comments should be made as to its effect on prothrombin activity and what influence this should have on the initial Coumadin dose. Heparin was administered concomitantly with Coumadin in 30 instances for the reasons given. It was administered in divided doses intravenously and intramuscularly prior to and for the first several days of Coumadin administration. The dose varied from 50 to 200 mgms. every 6 to 12 hours. In order to determine the influence of Heparin on prothrombin activity, we have reviewed cases where Heparin was given alone or for a day or two prior to other anticoagulants. From the data accumulated, it would appear that Heparin in doses of 100 mgms. intramuscularly twice daily had no effect on prothrombin activity as measured by the Quick method, while exerting an influence on clotting time that appeared to be cumulative. Doses of 100 mgms. three times daily intramuscularly had variable effects. but never of significant degree. Larger doses (400 mgms. or more daily) intramuscularly significantly depressed the prothrombin activity (below 50%), as did smaller doses (200 mgms. daily) given intravenously, particularly if continued for more than 24 hours. Hence, these latter doses necessitated a reduced initial dose of oral anticoagulant.

Our experience confirms the findings of previously reported series as to the fairly rapid and consistent hypoprothrombinemia-effect of Coumadin as measured by the Quick one-stage method. Within 12 hours there is moderate effect on prothrombin activity in some cases but, in many cases, little if any depression of the prothrombin activity has occurred at this time and even as long as 18 hours in a few. Following this initial latent period, there is a rapid

decline in prothrombin activity, with therapeutic levels attained in 24 to 36 hours (second 24 hour period) after administration. Within the dose range of 50 to 75 mgms., there was little difference in the achievement of a therapeutic effect in this 24 to 36 hour period, regardless of the patients' weights.

The persistence of action varies. In most cases where the effects of a single dose was studied, the prothrombin activity remained within the therapeutic range for 24 to 48 hours and then rose rather rapidly. In a few cases, the action persisted less than 24 hours, generally in those patients who were resistant to the drug. In some cases, the prothrombin activity dropped lower during the third 24 hours period, particularly if a double priming dose was given. In an occasional case, the depression of prothrombin activity persisted for four or five days. There were no essential differences in the time of onset of action, degree of prothrombin depression and the persistence of effect between the intravenous and oral routes. While the intravenous route is no more rapid than the oral route, it is most useful to have a drug that can be given intravenously in doses comparable to oral administration, particularly in situations where patients cannot take oral medications.

There were only four instances out of 73 initial anticoagulations where therapeutic levels were not attained in the second 24 hour period after Coumadin administration (Table III). In three of these

Table III

Failure to Reach Therapeutic Levels in Second 24 Hour Period

	Wt.	Dosage	Prothrombin Activity
1.	82 K	62 mgm. orally	60%
2.	61 K	75 mgm. orally	30%
3.	86 K	50 mgm. (double dose) orally	28%
4.	100 K	50 mgm. I-V	27%

cases, levels of 30% or below were attained, which is considered to be within the therapeutic range by some authorities. These failures can be attributed to an inadequate initial dose, two of which could not have been predicted. One patient was unusually resistant to the effect of Coumadin.

These results are in striking contrast to the results obtained with Dicumarol, the more commonly used anticoagulant. In spite of the fact that considerable experience has been accumulated with Dicumarol, it is rare, even now, for therapeutic levels of prothrombin activity to be attained until the third or fourth day after administration and frequently not until the sixth or seventh day. This is illustrated by a patient (Figure 5), who was anticoagulated with Dicumarol in 1952 and with Coumadin in 1957. The

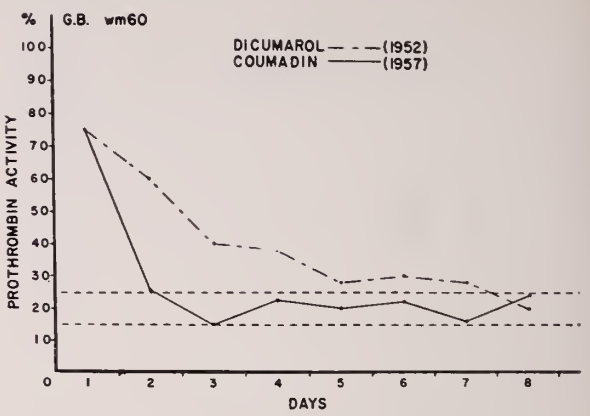


Figure 5

contrast is all the more striking when it is considered that we had much more experience and, therefore, should have had much greater faculty in using Dicumarol in 1952 than Coumadin in 1957. Figure 6 is another example of the apparent advantages of

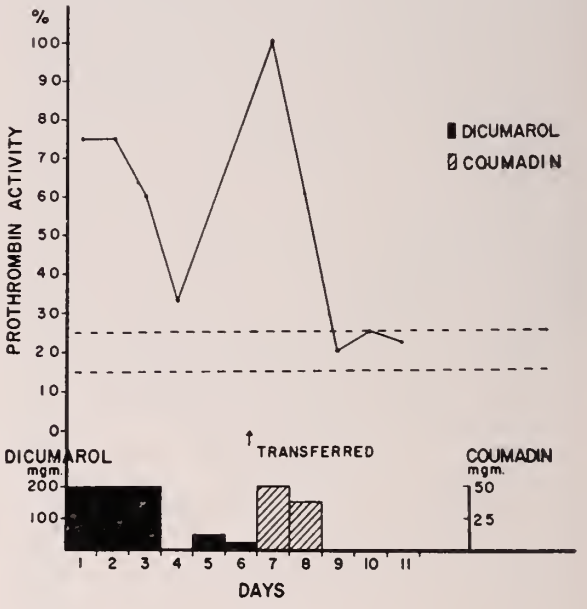


Figure 6

Coumadin over Dicumarol. In this instance, anticoagulation was attempted, using Dicumarol in doses of 200 mgms. daily for three days, but without achieving a therapeutic level of prothrombin activity. On transfer the seventh day, the prothrombin activity was back to 100%. In view of the apparent resistance to anticoagulant drugs, the patient was given a double priming dose of Coumadin (total 87.5 mgms.), with prompt reduction in prothrombin activity to therapeutic levels.

Excessive hypoprothrombinemia (prothrombin activity 10% or less) on initial anticoagulation occurred in 15 instances (Table IV). This was more

Table IV

Prothrombin Activity 10% or Below on Initial Anticoagulation

Single "Priming" Dose (75 mgm.)	1
Single "Priming" Dose (62.5 to 75 mgm.) plus Heparin	2
Double "Priming" Dose (55 to 93.5 mgm.)	8
Double "Priming" Dose (56 to 70 mgm.) plus Heparin	4

likely to occur when a double priming dose of Coumadin was used, and particularly when Heparin was given concomitantly. In most instances, the actual doses were not unusually large by average standards, and the excessive response represents instances of hypersensitivity to the drug. This hypersensitivity could have been determined had only a single priming dose been given, and the prothrombin activity the second morning after administration of the initial dose used as the index of response and the basis of subsequent doses. In these particular instances, the second dose was given on the basis of the level of prothrombin activity determined on the first morning after the initial dose had been given. As noted previously, this may be an unreliable index of the patient's sensitivity and the ultimate response to the initial dose.

In spite of achieving excessively low levels of hypoprothrombinemia on a number of occasions, there were only two instances of significant bleeding related to Coumadin administration. One was a thin, chronically ill, 58 year old white male with rheumatic heart disease who received 50 mgms. Coumadin orally and 150 mgms. of Heparin intramuscularly the first day, and 6.25 mgms. Coumadin and 100 mgms. Heparin the second day. The prothrombin activity was 10% on the third day and 7.5% on the fourth day. On this day he vomited dark blood and passed several tarry stools. He was treated with 50 mgms. of Vitamin K_1 ("Mephyton") intravenously and his prothrombin activity rose to 30% in about 4 hours. Subsequently he was given blood transfusions and an additional 50 mgms. of Vitamin K_1. After another 24 hours, there was no further evidence of bleeding. In this case, the priming dose of Coumadin was excessive and the primary cause of the bleeding, which occurred from a gastric ulcer (proved subsequently). Relatively small doses of Heparin were given and this was considered to be insignificant as a factor. The second case was a 36 year old white male, weighing 65 K, who was being treated for acute myocardial infarction. On the first day the control prothrombin activity was 75% and he received 62.5 mgms. of Coumadin orally and 150 mgms. of Heparin intravenously. On the second day he received 150 mgms. of Heparin intravenously, but no Coumadin. The prothrombin activity was 7% on the third day and 5.5% on the fourth day. On the fifth day, the prothrombin activity was still 5.5% and the patient began to notice a painful swelling on the lateral aspect of the left thigh which soon became ecchymotic. He was given 50 mgms. of Vitamin K_1 ("Mephyton") intravenously and within four hours the prothrombin activity had risen to 38%. The ecchymotic area continued to spread and remained painful for the next 24 hours, after which the pain and swelling gradually subsided. The prothrombin activity gradually rose over the next four days to 60% and, after a few more days, anticoagulation was resumed. Although this patient had received a moderate amount of Heparin intravenously, it is not considered that this contributed to the persistently excessive prothrombinemia and bleeding, since this occurred well over 24 hours after the last dose of Heparin. This was an instance of hypersensitivity to a single dose of Coumadin which was less than 1 mgm. per kilogram. It should have been suspected on the basis of the low prothrombin activity (7%) on the third day and definitely established by the even lower determination (5.5%) on the fourth day, with no Coumadin since the initial dose and no Heparin for over 24 hours. It is probable that Vitamin K_1 in 5 or 10 mgms. orally on the third or fourth day might have raised the prothrombin activity and prevented the bleeding.

Maintenance therapy was found to be quite smooth and easy in the great majority of cases, as has been reported by previous authors. The maintenance dose can be established quickly and remains fairly constant from day to day. We found that giving smaller doses daily was more satisfactory than giving larger doses intermittently. In general, the maintenance dose varied from 5 to 15 mgms. daily with an average of about 10 mgms. Some sensitive patients required as little as 5 mgms. every 2 to 3 days. Figure 7 is an example of the satisfactory maintenance after initial and prompt anticoagulation with Coumadin. A daily dose of 10 mgms. maintained a fairly constant level of prothrombin activity for a period of nearly 3 weeks. This case showed a decreased requirement for the drug (increased sensitivity) during the third week. Other cases have shown an increased requirement (decreased sensi-

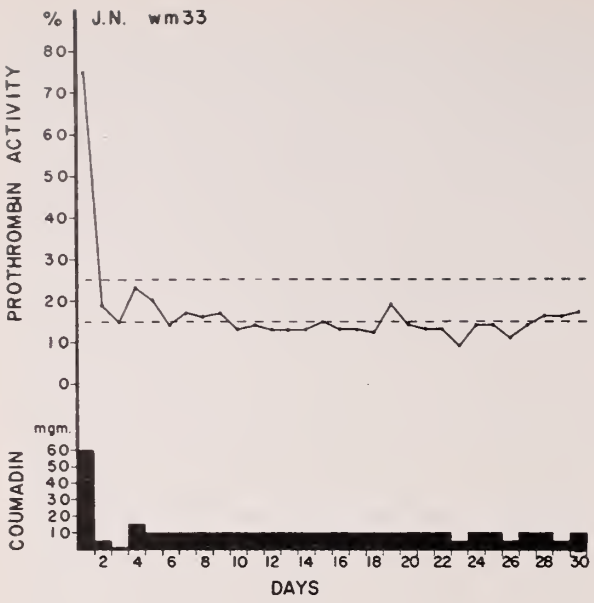


Figure 7

tivity) during this period. This phenomenon coincides with beginning ambulation in most instances, but whether it is related to this or is an indication of some intrinsic alteration in the coagulation mechanism from other causes is unknown and needs further study. Figure 8 is an example of a shift

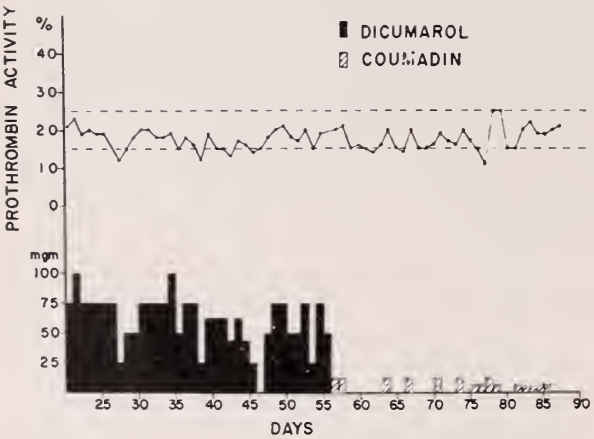


Figure 8

in maintenance therapy from Dicumarol to Coumadin. The patient was being satisfactorily maintained on Dicumarol in doses of 25 and 75 mgms. daily for the most part. On shifting over to Coumadin, the satisfactory maintenance was continued, using intermittent doses of 12.5 mgms. initially and later a daily dose of 6.25 mgms. It seems probable that this latter dose given daily throughout this period would have achieved a smoother maintenance as indicated by the results obtained during the last five days of therapy.

From a review of our experiences with Coumadin, the following recommendations regarding the use of this drug seem appropriate. The sensitivity of patients to Coumadin varies from individual to individual, but is fairly constant in the same patient. The initial dose is not correlated precisely with body weight. It would appear that a standard dose of 50 to 60 mgms. will be suitable in the vast majority of patients weighing between 60 and 80 kilograms and having control prothrombin activities of from 60% to 100%. This can be increased to 75 mgms. if the patient is unusually heavy or obese. The dose should be reduced for patients weighing less than 60 kilograms, if the control prothrombin time is 50% or less, if Heparin in significant amounts (more than 300 mgms. intramuscularly or 150 mgms. intravenously daily) is given concomitantly, or the patient is debilitated or cachectic. This reduced dosage will vary from 50 down to 25 mgms. depending upon these particular conditions. A double priming dose is not necessary and the next administration of the drug should wait until the *second* day *following* the initial priming dose. The prothrombin activity determined on the morning of this day will represent about the maximum effect of the initial dose, depending somewhat on the time of day the first dose was given, but certainly if it is more than 36 hours later. In nearly all cases the prothrombin activity will be within the therapeutic range at this time and maintenance therapy can be instituted. The response to the initial dose will be an indication of patients' sensitivity to Coumadin and will serve as a guide for subsequent maintenance therapy. In general, the dose schedule given in Table V will

Table V

Maintenance Therapy

Prothrombin Activity	Dose of Coumadin
Below 10%	0
10-15%	5 mgm.
15-20%	10 mgm.
20-25%	15 mgm.
20-30%	20 mgm.
30-40%	25 mgm.

maintain effective anticoagulation. Some further adjustments may be necessary for the next day or two, always keeping in mind that, with the establishment of anticoagulation, the prothrombin activity reflects the dose given the day before (if given prior to 12 hours). After two or three days of adjustment, a smooth maintenance is usually achieved on relatively constant dosage. Subsequent maintenance doses will depend upon the therapeutic response, but will

generally be 5 to 10 mgms. daily. In our experience, small daily doses achieve smoother control than intermittent larger doses.

In the average hospital, it is impractical to obtain repeated emergency tests of prothrombin activity during the initiating phase of anticoagulant therapy, so that after the first control determination, subsequent determinations are made in the morning as a usual routine. Actually, this routine is quite satisfactory when using Coumadin. The drug is given the first day after a control prothrombin has been obtained. No further drug need be given until the third day, at which time the morning determination of prothrombin activity will indicate the dose required for maintenance. Since a predictable and rather constant maintenance dose achieves a relatively stable level of prothrombin activity, it would appear that, once the maintenance dose has been established, less frequent determinations of prothrombin activity will be needed. Rather than daily prothrombin determinations, as is the usual routine, it should be possible to maintain satisfactory control with determinations made every two or even three days. This would represent a saving in laboratory expense and much less discomfort for the patient.

CONCLUSIONS

Our experience in 80 patients given Warfarin ("Coumadin") Sodium in 85 instances as an anticoagulant agent is in essential agreement with that previously reported by others. This drug is rapidly effective by oral or intravenous routes as measured by the Quick one-stage method, with therapeutic levels attained in 24 to 36 hours. The intravenous route is comparable to the oral route in dosage and rapidity of therapeutic action and, therefore, is of no particular advantage in these respects. However, it is useful to have an intravenous preparation available, should the need for it arise. There is considerable variation in the sensitivity of patients to the hypoprothrombinemia-inducing effects of Coumadin as measured by the Quick one-stage method which does not correlate precisely with body weight. Actually a standard dose appears to be a suitable one for the average patient, after which subsequent doses can be fairly well predicted from the response to this initial dose. The predictability of dosage in the same individual permits an easy and smooth maintenance control of prothrombin activity. Coumadin is free of toxic side reactions, the only adverse effects being its pharmacological action leading to excessive hypoprothrombinemia from overdosage. This latter is readily counteracted by Vitamin K_1 For these various reasons, it appears to be superior to all other hypoprothrombinemia-inducing agents currently available and, therefore, the drug of choice for anticoagulant therapy in thrombo-embolic disorders.

The dose of 1 mgm. per kilogram body weight, as advocated in the literature, is unreliable and is excessive in most instances. In addition, dosage based on patient's body weight seems impractical, since there is only a very gross correlation with body weight, and it is not always feasible to obtain a patient's weight. A suggested dose schedule, based on our experience, has been presented.

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Medical Uses of Tobacco, Past and Present

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IT HAS BEEN REMARKED that the first introduction of tobacco into the several countries of the world has always been in the guise of a medicine. One account (Med. Record 25: 684, 1884) of the origin of the use of tobacco as a medicine has it that "Sir John Nicot, Ambassador of the King of England to Portugal from 1559 to 1561, received a present of this then strange plant from Florida. He planted it in his garden, where it grew abundantly, and finally heard that a man had been cured of a *noli me tangere* [rodent ulcer] on his cheek, near unto his nose, and which already had begun to take root at the gristles of his nose, by applying tobacco-juice and the bruised herb. From that time forward this plant began to be famous throughout all Portugal for ulcers of the leg, ringworm, and scrofula. It was finally sent to France to help Lady Montigny, who suffered with an ulcer bred in her breast, and Countess of Ruffe to heal her face. The Lord of Jarnac caused the nicotine to be distilled and drank, mingled with water of Euphrasia, othewise called eyebright, by one that was short-breathed or asthmatic, and it cured him. When the juice was absorbed it sometimes made the patient exceedingly uncomfortable and faint." There is a light note of English patriotic zeal in this otherwise delightfully graphic account, for Jean (John) Nicot was actually Ambassador of the King of France. Incidentally, it is in his honor that the principle alkaloid of tobacco, nicotine, was named.

Many of the early synonyms for *Nicotiana* bear witness to the supposed therapeutic virtues of the plant: *Herba Panacea; Herbe propre à tous maux: Heilkraut.* The pharmacopoeias, official or unofficial, invariably included *Tabacum* (indeed, as late as the United States Pharmacopoeia of 1890), although by the 18th Century it had already been noted that tobacco was even then used more for amusement than for its medicinal virtues (Alston, 1770); and by the early 19th Century, the potential dangers of tobacco as a drug were well known (see, e. g. Albers, 1851). The interesting history of the use of tobacco in early medicine has been recounted by many writers (Buhler, 1937; Mullett, 1940; Massengill, 1943; B. L. Gordon, 1944; E. Coleman, 1947; among others), and the subject of the therapeutic use of tobacco has been periodically reviewed (Alston, 1770; Merat, 1821; Berutti, 1850; Stillé, 1874; Gués, 1883; E. Laurent, 1893; Jaucent, 1900; G. Petit, 1907; Gutierrez Muro, 1934; Mamlock, 1949; Uher, 1953). Nichols (1942) traced tobacco through the period when it was hailed as a remedy for all illness (*Herba Panacea*) to the modern concept in which it is no longer regarded, officially at least, as having therapeutic virtues. In this review, no attempt has been made to re-cover the earliest history of tobacco as a drug. In general, in this and in our other reviews of various aspects of tobacco, we have taken the date of the discovery of nicotine by Posselt & Reimann, 1828, as the dividing line between what may be termed the "ancient" and the "modern" or contemporary history of tobacco, at least for pharmacological and clinical purposes. Of course, such a division is not meant to be absolute, either in fact or in our treatment of the subject; but it is logical and convenient.

Though tobacco is no longer an *official* drug, it still is, as judged from the case reports of therapeutic overdosage which appear from time to time in the literature, not infrequently used as a folk-medicine—as, indeed, are virtually all herbs and plants. It is a curious fact in the history of therapeutics that plants (or plant products) which have once had a place in orthodox medicine, and which then, after having been discarded by "scientific medicine" of a later day, have continued to be used in folk-medicine, still later when their active ingredient has been discovered and pharmacologically investigated, become once more respectable members of the therapeutic family. This has happened, for example, with such diverse drugs as squill and licorice; and tobacco has also undergone a similar, if comparatively minor therapeutic rehabilitation, for

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both tobacco and nicotine (as such or by way of smoking) have been more or less rationally employed for their pharmacological effects by certain modern clinicians (see below).

Concerning the therapeutic dose of tobacco, the reader is referred to any of the older pharmacopoeias. Rather anachronistically, Gutierrez Muro (1934) has given the *internal* dose of tobacco as 0.05-0.10 gm. in the form of powder, and 0.5-1% in the form of an infusion; externally, a 1% decoction was recommended for lotions. Macht (1927), consulted concerning an order made by a physician calling for 25-30 doses of 2 mg. each of nicotine alkaloid in solution for intramuscular injection in a patient, took the occasion to point out to the medical profession in general the toxic potency of nicotine and the dangers attending its use.

CASE REPORTS ILLUSTRATING THE MEDICAL USES OF TOBACCO

[*Note:* This therapeutic index is conventionally and arbitrarily listed by body systems, with certain obvious exceptions. For convenience, the order conforms to that followed in our comprehensive Monograph (now in preparation) on the biological effects of tobacco and smoking, experimental and clinical.]

Diseases Due to Chemical Agents: *Strychnine Poisoning.* Haskell (1859) successfully treated a case of strychnine poisoning with tobacco smoke *per rectum.* Tobacco infusion was used with success in cases of strychnine poisoning reported by O'Reilly (1859, 1860), Haughton (1862), Chevers (1865), and B. W. Richardson (1867); however, J. J. Reese (1871) stated that such favorable results of strychnine-nicotine antagonism reported on man were not unequivocal.

In a case communicated to Haughton (1862) of a man poisoned by strychnine who had reached the stage of violent convulsions and opisthotonos, nicotine was administered in drop doses with whiskey-punch every half hour. After the second dose, the paroxysms were less violent, and the muscles of the abdomen became softer. When the patient had taken 4 doses, he was much better; the muscles were relaxed. Recovery occurred gradually.

Snake bite, etc. W. D. Johnson (1860a, b) used tobacco both externally and internally combined with free alcoholic stimulation as antidotes to the bites of poisonous reptiles and insects. The tobacco produced nausea and vomiting in every case in which it was resorted to. The author considered the patient as safe when nauseated or intoxicated, and proposed the internal administration of alcoholic stimulants and the local application of tobacco, either as cataplasm, decoction, or infusion, as the best treatment. Alcohol and tobacco were each effective when administered in time, and both together were more prompt than either separately. The local application of the tobacco greatly relieved the pain consequent of the swelling, and tended to arrest the swelling itself.

Nervous System: *Apoplexy.* Tobacco has been used in the treatment of apoplexy (Sigmond, 1938b).

Epilepsy. Sigmond (1838b) stated that tobacco was used in the treatment of epilepsy.

Hysteria. J. H. Thompson (1842) reported that a 22-year-old girl was brought out of a hysterical convulsion by application of a moist leaf of tobacco applied to the epigastric region. In 15 minutes, the hysterical symptoms had all disappeared; the patient felt sick, and continued so for some time, but did not vomit. Later attacks were arrested in the same way.

Analgesia. Snuff plasters applied locally to such areas as the toes, side of the body, face, and knee, were successfully used by Somervail (1838) for the relief of pain; symptoms (nausea, etc.) did not occur unless the cuticle were abraded. Following abrading of the skin to facilitate absorption, Chippendale (1845) applied by inunction an ointment of tobacco extract over the neuralgic area.

Hepburn (1879, 1880) stated that tobacco-smoke acted as a narcotic in toothache. A pea-sized plug of tobacco, inserted into the hollow of a painful tooth, resulted in poisoning (F. R. Chapman, 1880).

Tobacco Smoke as a Soporific. Weaks (1852-53) reported that a seven-day-old infant was given two tablespoons full of water impregnated with tobacco smoke to induce quietness through the night; unfortunately, fatal nicotine poisoning resulted. A case with a more favorable outcome was reported by Hervey (1869), who advised a non-smoker, long troubled with what appeared to be a pleurodynia attended with dull pain with consequent insomnia, to smoke a cigar or pipe before retiring; the effect of a few puffs was very marked, inducing a sweet and dreamless sleep.

Tic douloureux. According to Blanch (1845), infusions of tobacco were found to be inert in the treatment of *tic douloureux.*

Stammering. On the theory (attributed to Lytton) that stammering lips should put a pipe between them by way of improving the respiratory power, and possibly for the effect of the sedative on the coordina-

tion of the vocal apparatus, Cuthbert (1895) tried tobacco in these cases, and stated that the result was far from satisfactory.

Parkinsonism. Moll (1926) treated a series of 13 cases of typical post-encephalitic Parkinsonism of several months' standing with nicotine, 1/30 grain initially 3 times daily gradually increased to 1/10-1/5 grain for 2-3 weeks, or until symptoms of intolerance set in. Of the 13 cases, 9 showed an improvement after nicotine treatment, while 4 were unaffected. Permanent cures were not obtained, and Moll recommended that the treatment be repeated at frequent intervals of, say, two-three months. Nicotine had an undoubted action in reducing muscular rigidity, but had no effect on the tremors, and the persistency of tremors in some cases masked the improvement of the patient's stiffness.

Hemiballism. In the case of a 51-year-old male with the typical signs of hemiballism (hemichorea), the smoking of 1 or 2 cigarettes was said to have reduced both the amplitude and frequency of the involuntary movements (Grigoresco & Axente, 1931).

Miscellaneous. Rothman & Coon (1939) described a pharmacodynamic test of the skin based on the pilomotor action of nicotine (0.1-0.2 ml. of 1:1000 nicotine sulphate or picrate in physiological saline intradermally results in the appearance of "gooseflesh" during or immediately after the injection). Clinically, the nicotine test was first utilized to study the restoration of pilomotor function in pedicle skin grafts (Kredel & Phemister, Arch. Neurol. and Psychiat. 42: 403, 1939). The reaction can be used for testing and localizing disturbances of the sympathetic system in its peripheral neurones, as the histamine test is used for detecting disturbances of the sensory system. Nicotine is stable to the heat of sterilization in the dilutions used, and the dose is too small to give ill effects.

Diseases of the Skeletal Muscles: *Muscle Spasm.* Diver (1845) recommended an ointment containing nicotine to be applied externally to relieve muscle spasm and when antiphlogistic properties were desired.

Muscle Contracture. In a case reported by Ranney (1848), a young woman had developed a permanent contraction of the muscles originating on the right side of the pelvis, the foot being drawn up to the thigh. After trying various remedies, a tobacco enema was given, and relaxation followed. On the next day, there was some tendency for the muscles to contract, but a repetition of the tobacco treatment was speedily effective and complete recovery ensued.

Blood: *Hemostatic.* O'Neill (1879) reported the case of a woman with varicose veins who accidentally bruised her leg causing it to bleed profusely; to stop the bleeding, she applied a handful of chopped wet tobacco to the wound and covered it with a bandage. Severe non-fatal nicotine poisoning resulted.

Cardiovascular System: Stadelmann (1900) made observations on the effect of nicotine on a number of heart conditions, including myocarditis, bradycardia, tachycardia, and mitral insufficiency. He concluded that nicotine was not a valuable drug in the treatment of cardiac patients, despite its not insignificant effect on blood pressure; the incalculable and unpleasant side-actions of nicotine prevent its general use.

Hooper (1885) reported the case of a young man who had violent pain in his heart accompanied by violent beating; the attacks gradually increased in frequency and duration until the patient was having six attacks a day lasting one to one and a half minutes each. Hooper treated the patient unsuccessfully for 14 months with a variety of procedures, and at the end of this time the latter was in deplorable condition, entirely unfit for the duties of life, with his extremities becoming edematous and cyanosed. At this point, Hooper noticed in *The Lancet* an account of experiments by Rulliford on the action of nicotine on the ganglion of Remak, or the inhibitory nerve of the heart; and as a last resort, he advised his patient to start smoking tobacco. With his first pipe of tobacco, the blueness faded from the patient's extremities, and the edema appreciably subsided. At the end of two weeks' use of tobacco, the attacks ceased; the patient remained in perfect health, and "is now an active practitioner of medicine."

Nicotine in *homeopathic* doses was employed in angiospasm by Jaisoorya (1942, 1942-43). In a heavy smoker with Raynaud's disease, pregangrenous stage, immediate relief was brought about by three doses of nicotine in 200th centessimal dilution [i. e. a series of 200 dilutions, the first of which contains one part of the drug and 100 parts of diluent, the second one part of the first dilution and one hundred parts of diluent etc., so that probably only occasionally did a dose contain a molecule of nicotine!] In another patient, whose attacks were more frequent on smoking, nicotine in 30 centessimal dilution, six doses twice a day, caused great improvement. In the case of a heavy smoker with repeated anginoid attacks, the condition was completely relieved by treatment with tabaccum in 30th centessimal dilution following cessation of smoking.

Respiratory System: *Respiratory Stimulant.* The historical use of tobacco fumes as a respiratory stimulant has been interestingly described by H. E. Fisher (1944). In cases of apparent death, when other aid is not at hand, Hildenbrand (1801) advocated the use of tobacco leaves externally, first laying them on and then rubbing with them.

Pulmonary Disease. Montgomery (1895) considered that moderate tobacco smoking might possibly be beneficial in pulmonary disease, due to possible antiseptic action of the smoke, and its reflex vasoconstrictor action (through stimulation of afferent nerves in mouth, larynx, etc.) which might tend to relieve or prevent the chronic congestion present in chronic pulmonary affections. In this connection, the use of "antiseptic cigarettes" may be briefly mentioned. H. M. Jones (1887), for example, described an antiseptic cigarette of the following composition: tobacco, eucalyptus, and iodoform disguised with coffee; each cigarette contained one grain of the active ingredient; dose, half a cigarette three times a day. In such preparations, however, the cigarette is considered to be a vehicle for the administration of presumably more active antiseptic drugs.

Croup. Dr. Vanderburgh is credited by Godman (1828) with introducing the use of a plaster covered with dry Scotch snuff in the treatment of croup. Godman claimed that this procedure caused the symptoms of tracheal irritation and harsh crouping cough to cease, and produced profound sleep with gentle respiration; the treatment never caused vomiting, vertigo, or any other distressing symptoms. N. Chapman (1828) also described the successful use of tobacco to relax the laryngeal spasm in cynanche trachealis; he had the patient smoke a cigar.

Nasal Catarrh. According to an annotation in *The Lancet* (*1*: 406, 1913), there was some evidence that tobacco smoke was preventive of some forms of nasal catarrh.

Nasal Polyp. Townsend (1821) stated that the use of snuff has generally been supposed to be one of the many causes of polypus nasi. However, he himself recorded a case of polypi of alarming size appearing in both nostrils, which he treated with large quantities of Scotch snuff. The snuff was introduced into the nose in such amount that during the first few weeks it caused severe vomiting. The tumors began to recede, and in a few years every vestige of the disease vanished. He added that he had another patient who was rapidly improving from the same disease under the same treatment.

Hiccough. Higginbotham (1890) stated that he had cured several cases of very obstinant singultus by means of pills containing 1/40 grain nicotine. Slevin (1895) reported the case of a man of 78 who hiccoughed persistently for 12 days without intermission; he was then given a box of very pungent snuff, and during the night took several pinches which produced sneezing; and on the following day was fully recovered.

Genitourinary System: *Dropsy.* In 1785, Fowler published his *Medical Reports of Effects of Tobacco With Regard to its Diuretic Quality;* in 79 cases of dropsy in which tobacco was given, there resulted 28 cures, and 32 were relieved. Sigmond (1838f) stated that tobacco taken internally was a very serviceable remedy for dropsy, but one which had fallen into disrepute. About this time, however, it was reported (W. A. G., 1840) that application of a moistened tobacco leaf over the epigastrium into dropsical patients was immediately followed by a profuse discharge of urine and the disappearance of dropsical symptoms. "On the whole" wrote Stillé as late as 1874, "it seems probable that tobacco might with advantage take the place of Digitalis in the treatment of many dropsies for which medicine is now prescribed."

Paresis of the Urinary Bladder. Pavessi (1853, 1854) reported a case of paralysis of the bladder in an elderly man which he treated by twice-daily instillations of solutions of nicotine. The bladder was said to have acquired a daily increased power of contraction, so that at the end of 15 days, the catheter was laid aside.

Gastrointestinal System: Back in the days when one of the most popular therapeutic measures was either a "purge" or a "vomit", tobacco had the distinction of fulfilling either purpose. Under "Oyl of Tobacco," Bate's Dispensary (1699) advised: "Anoint the pit of the stomach with gr. v or vi and the patient will presently vomit, but if you would move the body downwards, anoint about the navel therewith and the sick will presently fall a purging." In a somewhat more sophisticated age, Sigmond (1838c) regarded tobacco-infusion enemas as a therapeutic agent of very considerable importance, in which, however, one must be prepared for the violence of its action; precordial anxiety, vomiting, death-like paleness and cold sweat, as well as more distressing symptoms, and possible fatal termination. He noted that tobacco enemas have been used to stop hemorrhoidal bleeding, to dislodge obstructive material in the esophagus by vomiting; in ileus,

colic, obstipation, and strangulated hernia. A considerable number of case reports have appeared in the literature illustrating the dangers of tobacco enemas in these and other intestinal conditions, and writers before and after Sigmond have deplored the use of, or urged great caution in the employment of such dangerous remedies (e. g. Acta Helvetica, 1762; Copland, 1860).

Constipation. Vorwahl (1933) pointed out that Prof. Glasmer's treatment of habitual obstipation by carbon dioxide evolution in the intestine was not as new as it would appear: over 200 years ago, tobacco smoke, which contains large amounts of carbon monoxide and carbon dioxide was used for this purpose; and Vorwahl reproduced pictures of instruments used for producing and delivering the tobacco smoke into the rectum. Copland (1860) believed that introduction of tobacco smoke into the large bowel was safer and a more efficacious practice than the use of tobacco-infusion enemas. The use of such enemas in constipation has resulted in severe or fatal poisoning (Acta Helvetica, 1762; Grahl, 1830; among others), and in the case of a man who swallowed two tablespoonsful of tobacco to relieve constipation, characteristic nicotine poisoning resulted (van Valzah, 1876-77). O'Donovan (1858) successfully used tobacco enemas in three cases of constipation; the recommended dose was one-half to one dram of tobacco, depending on the patient, in 2-4 oz. of water. W. D. Jones (1891) recommended tobacco enema (one dram to a pint of boiling water) administered *ad nauseam* as one of the most efficient remedies of a palliative character available to the physician treating cases of fecal obstruction of the intestines, and he reported two cases in which tobacco was used with good effect.

In spite of the "time honored observation that many smokers are severely constipated" (Batterman, 1955), the "morning cigarette" is used by many other smokers to promote bowel movement. Having observed that smoking a cigarette increased intestinal peristalsis, Calatayud (1944) made therapeutic application of his results in a series of 100 patients, each of whom was asked to smoke a cigarette while fasting, and each of whom was followed closely for a period of 5 years. Patients were considered to be cured who recovered their intestinal habit and actually defecated daily and normally after having smoked one cigarette after fasting for a while. Included among the failures were the ones in whom the repugnance for tobacco made continuation impossible, and those in whom tobacco did not favorably modify their intestinal stasis. In summary, of 62 non-smokers treated, 49 were cured, with 13 failures; of 38 smokers treated, 26 were cured, with 12 failures. Thus, with 75% of his patients cured, Calatayud concluded that his method had practical value, being much more convenient, economical, effective, and inoffensive than many of the laxatives and purgatives used by chronically costive patients.

Intussusception. Haskell (1859) recommended the use of tobacco smoke *per rectum* in the treatment of this condition, and R. R. Ball (1886) described a case of intussusception which yielded to tobacco enemas. The enemas were given at hourly intervals for 12 hours, the enemas being infusions of one dram rising to two ounces of tobacco for each enema. The object was to cause relaxation of the whole muscular system, hoping thus to overcome the spasmodic muscular contraction of the invaginated bowel.

Hernia. The general muscular relaxation produced by tobacco was also used to make possible reduction of strangulated hernia. The tobacco might be used in the form of an enema (S. Jackson, 1839; O'Donovan, 1858; B. P. Reese, 1861), occasionally with fatal outcome (Paris & Fonblanque, 1823; among others) or as tobacco smoke *per rectum* (Haskell, 1859) or even by deglutition of tobacco smoke in susceptible patients (S. Jackson, 1839). Jensen (1938) has given an interesting historical account of the use of tobacco smoke administered rectally in the treatment of incarcerated hernia.

E. Mitchell (1850) related the case of a Negro who was laboring under a strangulated inguinal hernia of long continuance, attended by fecal vomiting. A warm bath and other methods having failed, and with a fatal result seemingly impending, Mitchell ordered as a last resort an enema of 1 dram of tobacco in a pint of water, and left the patient for the night. The next morning, to the physician's surprise, he found his patient walking about quite well, and on inquiry he learned that the patient had swallowed what had been intended to be given as an enema; that it had produced much prostration, accompanied by relaxation, during which the hernial tumor had been spontaneously and completely reduced.

Ileus. Ronzier-Joly wrote in 1857 that tobacco had been used in the treatment of ileus for more than two centuries. He too pointed out the great variability in the action of tobacco, and the need to use prudence in its administration; but he maintained that tobacco was very useful in this condition, and presented three case histories in which it had been

employed. Haskell (1859) and Copland (1860) preferred introduction of tobacco smoke into the large bowel to the use of tobacco enemas in this condition. Cameron (1886) reported two cases of ileus in which a tobacco poultice applied to the abdomen brought relief and subsequent cure; in both cases, the poultice stopped the pain and discomfort, and subsequent enemas, in one case, of tobacco infusion, brought about bowel movement. According to Torresi (1904), enteroclysms of warm tobacco infusion (up to 30 gm. of leaf per liter) administered through a long flexible sound gave good results in 5 out of 7 cases of paralytic ileus; the other two cases were *in extremis* at the time of attempt.

Rosenstein & Kohler (1928) devised a procedure for the injection of nicotine into the coeliac ganglion of man for the relief of intestinal paralysis. In 26 cases, doses of nicotine up to 10 mg. were used, although the usual dose was less than this; and in 17 of these, temporary relief, with consequent passage of stools was afforded. This use of nicotine was reserved for cases of paralytic ileus, since increased peristalsis in mechanical obstruction only aggravates the condition; and the authors felt their treatment represented a not insignificant advance in the therapy of intestinal paralysis. Noting that 2-3 mg. of nicotine injected into the right or left coeliac ganglion in rabbits, cats, and dogs were effective in the treatment of experimental paralytic ileus, Ghiron & Scandurra (1930) recommended a dose of 6 mg. in man, and stated that it was not necessary to reach the coeliac ganglion to obtain the desired effects; it sufficed to infiltrate posteriorly the periaortic cellular space. However, Ochsner, Gage & Cutting (1930) concluded from their experiments on dogs that nicotine when injected into the splanchnic area was probably of little or no value in the treatment of ileus. These authors thought it conceivable that the injection of nicotine directly into the semilunar ganglion might produce more pronounced effects than those obtained by diffusion, although diffusion was the only method clinically available and safe; furthermore, the injection of nicotine was open to serious objections in that it produced rapid and exaggerated increases in blood pressure.

Colic. Fowler (1785) reported observations on the use of clysters of tobacco in the treatment of colic; and the author who signed himself "Physician" (1813) administered an enema of the infusion of the tobacco in the proportion of 2 drams to 8 oz. of water in this condition. His patient died, whereupon he cautioned others against prescribing so large a dose, and suggested half a dram in 12 oz. of water, to be increased gradually if not effective.

Wertheim (1851) claimed beneficial effects on stomach and intestinal cramps with small doses of nicotine or coniine, i. e. one mg. distributed over 5-6 days' time. It may be suspected that this author was operating on homeopathic principles.

Miscellaneous Conditions, from Mouth to Anus. Tassinari (1891) concluded that tobacco smoke merited serious consideration in the hygiene of the mouth as a prophylactic measure against the diseases of the oral cavity which have a parasitic origin. Cavallaro (1910) agreed that, since in his experiments tobacco sterilized the saliva, instead of proscribing it, one should recommend its use in oral prophylaxis.

Audier (1950) treated 12 paradentosis patients with either a 4% tobacco-smoke condensate emulsion in gum arabic or a 4% paste. Clinically, distinct improvement was observed, but toxicity of the product prevented its general use. Ultimately, the author developed a product called Parex, made with nicotinic acid and nicotyrine as active ingredients. Toxicity tests showed high therapeutic ratio, and five case histories were presented to show its effectiveness in treatment of peridontal diseases. Audier noted that primitive tribes in South America cleaned their teeth and gums with tobacco products, and that among them scarcely any paradentosis occurs.

A boy suffering from intense pruritis ani was treated by his father with a tobacco infusion enema; severe non-fatal poisoning ensued (Fulpius, 1913).

Tobacco enemas have been used to stop hemorrhoidal bleeding (Sigmond, 1838c), and Wright (1846) reported the case of a man who was induced to sit over a chamber-pot containing half an ounce of tobacco together with some burning coals to ease himself of piles; in a few minutes, characteristic nicotine poisoning supervened.

The Use of Nicotine as a Vermifuge. It would appear that this use of tobacco was originally a therapeutic accident. In treating a sailor with an abdominal wound, Surgeon Turner (1762) procured a stool by means of fumes of tobacco injected through a tube. During the use of these clysters, several dead worms of the teretes kind came away with the stools. Noting this, Turner concluded that this might be a valuable treatment for worms, and soon after tried it on a man who had been troubled with worms for years. The treatment was applied twice a day, and produced a prodigious number of ascarides. The worms against which tobacco has been employed include round-worms, tape-worms, threadworms, and

pinworms; and the tobacco was administered by mouth (Cunningham, 1836), as a cataplasm as an adjunct to oral administration (Sigmond, 1838b), but more generally in form of an enema of tobacco infusion. This latter procedure not infrequently resulted in severe or fatal tobacco poisoning, and many cases have been reported in the literature (Tavignot, 1840, 1841; Bertini, 1846; J. B. Wilkinson, 1889; Bleasdale, 1906; Lancet *2*: 765, 1894; Ehrnrooth, 1912; Garvin, 1913; Detis, 1937; Willis, 1937; among others). It is noteworthy that in virtually all of these cases the use of tobacco or tobacco enema as a vermifuge apparently followed lay advice, and the appearance of such cases well into the 20th Century indicates that tobacco still maintains its popularity—and peril—in folk-medicine.

Disorders of Metabolism and Nutrition: *Gout.* Fumigation for gout, a procedure ascribed to the Abbé Girod, consisted according to Reveillé-Parise (1836), of exposing the ailing part for about a quarter of an hour to the fumes of tobacco thrown a little at a time on burning coals. The treatment was repeated 2-3 times during 24 hours, and continued for several days. Hinard (1843) successfully treated himself for gout in this manner; he used a portable stove, put tobacco on the burning coals, and exposed his foot to the fumes.

Growth of Hair. Sigmund (1838a) stated that the application of tobacco was useful to make hair grow on parts which had been for a considerable time denuded.

Diseases of the Endocrine Glands: *Diabetes Mellitus.* Saxe (1870-71) reported a case of saccharine diabetes following upon cessation of smoking, and relieved by resuming smoking.

Diabetes Insipidus. C. F. Mayer (1957) reported that a group of physicians in Bordeaux had started to prescribe cigarette-smoking for their patients suffering from diabetes insipidus, since smoking seemed to bring down the urinary output to normal. In a case described by these latter physicians, an average daily excretion of 6.35 liters of urine was reduced to an average of 3.55 liters by smoking 10-20 cigarettes a day (Moretti, Benelli & Meriaux, 1957).

Reproduction: *Tobacco as an Abortifacient.* Needless to say, the use of tobacco as an abortifacient is a part of folk rather than of orthodox medicine. Illustrative cases, in which such use was followed by severe or fatal nicotine poisoning, were reported by Landerer (1868) and Afanassiev (1931). Since only fatal cases are likely to become known and reported in the medical literature, it is not improbable that the use of tobacco in this connection is more common than the paucity of reports would indicate.

Skin Diseases and Local Affections: *Dermatitis.* Landerer (1868) noted that the juice which collects in the long tobacco pipes of the Orientals when they smoke is collected by those who are engaged in the cleaning of these pipes, and is used throughout the Orient as a specific agent against obstinate exanthematous diseases and also against herpetic eruptions, psoriasis, and similar chronic skin diseases in the form of a salve or even in the natural state; nicotine poisoning often resulted. A similar use of "pipe juice" or "pipe oil" was not uncommon in the Occident, with nicotine poisoning also a sequel. A young man affected with herpes tonsurans was advised by a charlatan to treat it with empyreumatic oil of tobacco, and, obtaining a certain amount from pipes, he applied it to his arm (Calosi, 1858); and similar application to vesicular herpes on the right forearm in another case (Turchetti, 1860) resulted in each instance in typical nicotine poisoning. In 2 cases, the contents of a pipe stem were used to heal a sore or a bruise on the lip of a child, and in each case poisoning and death ensued (Boston Medical and Surgical Journal 78: 340, 1868; Hare, 1885).

Other preparations of tobacco, particularly decoctions of tobacco leaves, have been employed in various skin diseases. B. J. A. Murray (1793) reported that such a decoction applied to a scabby rash produced nicotine poisoning in one man, and a man with a scurfy skin used a lotion of a strong decoction of tobacco as a cure for his skin disease with similar result. Within recent years there has been a resurgence of interest in the use of such tobacco extracts in various dermatoses. Jausion et al. (1940) incorporated an aqueous extract of tobacco (20 gm. per liter) with one-fourth the volume of 5% agar; the mixture was then spread on sterile gauze compresses to be used within 8 days. The following results were reported: in 8 cases of streptococci, impetigo, or ecthyma with delayed skin regeneration after vaccine therapy with staphylo-streptococci peptides, or after sulfa therapy, six epidermizations were obtained in 2-10 days, and 2 ameliorations were obtained after 2-3 applications; 2-20 dressings gave decisive results in 21 and incomplete results in 10 cases of post-scabes "dermo-epidermitis"; in furunculosis, complete skin restoration was obtained in 11 cases in a maximum period of 12 days, and in most in less than a week; in 9 cases of trophic ulcer

on varicosed legs, 7 cicatrized in less than 8 days, and 2 between 10-15 days; 2 cases of "epidermophitis inguinalis" resulting in mild nicotine poisoning from absorption from a large chafed surface.

Rothman & McCreary (1949a) reported failing to cure or improve a housewife, aged 57 years, with pustular psoriasis and acrodermatitis continua of the hands. The patient then, on her own initiative, soaked her hands in hot tobacco juice 6-8 times a day; the juice was prepared by boiling tobacco in water for 2 minutes, and each soaking lasted 5-10 minutes. Within one week, considerable improvement was seen in all the treated lesions, and almost complete cure of the hands and fingers was achieved in 4 weeks. Another of Rothman & McCreary's patients with a similar condition, and apparently again on her own initiative, treated herself with a decoction of tobacco with similar good result (Rothman & McCreary, 1949b).

Kaminsky, Sevinsky & Kaplan (1950) reported the treatment of pustulous dermatoses of the extremities with a tobacco decoction of the type described by Rothman & McCreary, and claimed to have produced spectacular results; the pustules dried up, the skin elements appeared, and the surface rapidly acquired an appearance comparable to the palmar and plantar skin in ichthyosis. The decoction was made by boiling 100 gm. of chopped tobacco in two liters of water for 2 minutes, then cooling and filtering. The liquid was applied 4 times a day as hot as the patient could stand; each treatment lasted 10 minutes. Solutions of nicotine did not give comparable results.

Gruneberg & Theune (1954) described a case of acrodermatitis continua in which treatment with tobacco decoction proved to be very effective, although not alone sufficient to bring about healing. The decoction was made by boiling about 40 gm. of dried raw tobacco leaves in 10 liters of water for 30 minutes. The patient took about eight 20-minutes-long hand- and foot-baths per day in this decoction; no symptoms of intoxication developed during about 18 months of treatment.

Buchvarov, Antonov & Mluchkova (1954) reported that, compared to other tars, tobacco tar possessed the most potent antipruritic, drying, and keratoplastic effect; this effect appeared especially clearly in the treatment of eczema. Out of 103 patients treated, there was an immediate good result in 78 cases following 2-4 days of treatment, manifested by drying up, epithelization of eroded areas, softening and healing of the skin, and diminishing and disappearing of itching; 4 patients did not improve; 24 showed negative results. The authors did not advocate tobacco tar as a panacea, but considered it a valuable adjunct to other forms of treatment in dermatology. They warned that tobacco tar is a potent poison, and must be washed until its nicotine content is no more than 2 parts per 1000 before using.

Tobacco as an Antipruritic. Application of tobacco was said by Sigmond (1838a) to be useful in severe itching, particularly after insect bites.

Dumas (1937) prepared tobacco ash by burning tobacco on a wire screen, then finely pulverized the ash in a mortar. He used this in the treatment of pruritis ani, ringworm, athlete's foot, and superficial ulceration, with very satisfactory effect. The ash was dessicant, stimulant, and antiseptic. Applied to wounds, it was accompanied by a moderately severe burning lasting a few minutes. As an ointment made with lanolin, it allayed the severest itching almost immediately. It was also good for a dentifrice and as metal polish.

Ringworm. According to M. G. Evans (1869), pipe scrapings mixed with a little oil were applied to an abraded area thought to be ringworm; non-fatal nicotine poisoning ensued. A similar result was reported in the case of a small girl treated for ringworm by her mother by vigorously rubbing her trunk and limbs with a mixture of writing ink and scrapings from an old tobacco pipe (J. O. Jones & Morris, 1926).

Burns. In discussing peripheral vasoconstricting agents in burns, Breidenbach (1943) stated: "We treated three other patients with second-degree burns of the hands and feet by another method for vasoconstriction of the peripheral vessels suggested by Dr. Berkaw; namely, the use of tobacco smoke. The hand or foot was encircled in a Bunyon envelope made of cellophane and a clay pipe containing tobacco had attached to its stem a bulb and rubber tubing. By pressing the bulb, smoke was forced from the free end of the rubber tube inside the envelope. The envelope was thus kept full of tobacco smoke. The burned area did not lose any fluid, it formed a thin transparent eschar, and healing took place rapidly. This method was not tried in extensive burns."

Ulcers. Application of tobacco leaf to an ulcerated arm (Murray, 1793) and to ulcers on the legs (Allan, 1871) resulted in severe nicotine poisoning.

Scabies; Itch. In experiments on the deadliness of various agents recommended for combating itch-

mites, the empyreumatic juice from the tobacco pipe, which killed the mites immediately, was found to be the most effective agent; but it could not be easily used on the skin, for there was danger that it might injure the host (Küchenmeister, cited by von Skramlik, 1948).

Melier (1824) reported that 2 oz. of leaf tobacco boiled in one pint of water and applied as a lotion twice daily, a half glass for each lotion, was a slow cure for the itch, and one not free of ill-effects, such as nausea and dizziness. Melier (1844-45) also stated that work in tobacco factories was prophylactic against the itch. Poisson (1881), however, declared that this was an illusion, but he added that tobacco workers were exempt from chilblains in their hands. Cases of nicotine poisoning resulting from application of tobacco infusions to the skin in cases of itch were reported by Sigmond (1838a) and Blanchard (1869), among others.

A preparation of nicotine salicylate called "Eudermol" was made into a 0.1% salve with lanolin, and used in the treatment of scabies by Wolters (1898). Following a preliminary soap bath, a single inunction sufficed to cure 64 of 67 patients. Children as well as adults, men as well as woman, endured the treatment without difficulty and without the appearance of any intoxication symptoms. Comparisons were made with nicotine soap. With the latter material, 2 out of 8 patients showed marked intoxication symptoms (headache, nausea, vomiting, palpitations, dyspnea).

A soap containing 10% of a tobacco extract containing about 7% nicotine (the product therefore containing about 0.7% nicotine) was used successfully in cases of parasitic and pruritic skin diseases by Taenzer (1895, 1897). Another nicotine soap, composed of 5% tobacco extract, 5% precipitated sulphur, and 90% soap, was also used with success in 32 cases of scabies, 6 cases of pityriasis versicolor, 4 cases of herpes tonsurans circumscriptus, 4 cases of urticaria, and 2 cases of prurigo incipiens (Marcuse, 1899a, b). In scabies, 3-4 days of application were required for a cure, and apparently no ill effects occurred. These soaps were made by C. Mentzel in Bremen.

Pediculosis. A salve made of snuff and butter rubbed on three children to cure head lice resulted in characteristic nicotine poisoning (Murray, 1793). Two young girls had their scalps treated against vermin with a nicotine solution; non-fatal poisoning ensued (Weill & Delore, 1923; 1924a, b).

A man suffering from pediculi pubis boiled 200 gm. of tobacco in two liters of water, then rubbed the solution over his whole body, leaving it to dry on the skin; typical nicotine poisoning resulted (Auche, 1891).

If tobacco is to continue to be therapeutically employed in the treatment of skin disorders, we suggest that, in view of the variable composition of tobaccos (especially in terms of nicotine content), it would be highly desirable to make available to physicians a "standardized" tobacco preparation for topical use. In this event, a standard strength of solution and a precise manner of its preparation (as with pharmacopoeial decoctions and/or infusions of other drugs) would allow comparison to be made between reported results of future authors.

Infectious Diseases: *Tobacco as a Prophylactic in Contagious Disease.* Allen (1835) stated that Diemerbroeck [*De peste,* 1646] has usually been quoted as authority for the anticontagious character of tobacco. During the Great Plague in London in 1665, children were told to smoke in their schoolrooms (Lancet 1: 1266-1267, 1902); and *A Brief Abstract of the Virtues of the American Tobacco Plant* (1783) records that buriers of the dead, in charge of dead-carts, at first used tobacco as a deodorizer, "little thinking that what they used for momentary relief would prove a constant preventive. When the Plague was happily stayed, the virtues of tobacco began to be investigated, and it was found that those persons who plentifully used it, either in smoking or in snuffing, had most wonderfully escaped the dire contagion; for though they visited the chambers of the sick, attended the funerals of cartloads at a time, they unexpectedly avoided the infection." Although Allen in 1835 declared that this idea that tobacco operated as an antidote to contagious and infectious diseases was gratuitous and fallacious, the belief continued to play a role in public health for some time. It was reported in *The Lancet* (*1*: 201, 1882) that smallpox having appeared in the Bolton Workhouse, the Guardians resolved to issue tobacco freely to the inmates in order that the wards may be disinfected by the fumes. And, in another note in *The Lancet* (*1*: 406, 1913) of a later date: "A good many years ago it was reported by the senior medical officer of Greenwich Workhouse that the tobacco-smoking inmates enjoyed comparative immunity from epidemics, and tobacco-smoking was believed to have had the disinfectant action in cases of cholera and other infectious diseases. Again during a cholera epidemic at Hamburg it was reported that not a single work-

man engaged in the cigar factory in that city was attacked by the disease. Later it was stated that amongst a body of 5000 cigar makers only 8 cases and 4 deaths from cholera occurred. Subsequently experiments proved that tobacco smoke destroyed the bacilli of Asiatic Cholera as well as pneumonia." This note in *The Lancet* apparently referred to the work of Visalli (1888) who found that tobacco smoke was capable of inhibiting the growth of the bacillus of Asiatic cholera; and indeed, Visalli himself concluded that, since the portal of entry of this bacillus is the mouth, tobacco smoke should have prophylactic value.

It is a fact that workmen in tobacco factories are often cited as being immune from cholera and other epidemics. In Toulouse, shortly before the French Revolution the workmen in the State tobacco factory were said to have remained immune during a deadly epidemic of suette [miliary fever] (Lancet 1: 1266-1267, 1902). Melier (1844-45) stated that the manufacture of tobacco appeared to preserve the workmen from intermittent fevers [malaria]. This was denied by Ruef (1844-45) and by Poisson (1881); but W. L. McGregor (1845) expressed his own belief in the prophylactic power of tobacco in malaria.

Some of the theories and studies on the subject of "Does Smoking Protect Against Infection?" were briefly reviewed in the British Medical Journal (2: 253, 1889). Granting that pyridine, "a destroyer of bacteria," has been demonstrated to be present in tobacco smoke, the Journal made the following conclusion: "We advise non-smokers not to put their trust in pyridine during the prevalence of fevers, and to remember that their tobacco-loving friends owe their immunity to good health and strength, which enables them to stand tobacco and, at the same time, to resist infection." A later annotator in The Lancet (1: 406, 1913), writing of the germicidal properties of tobacco smoke and the reported beneficial disinfectant action in cases of cholera and other infectious diseases, went on to say: "Excessive tobacco-smoking, of course, may easily give rise to constitutional effects which diminish the resisting power of the body to disease, in which case it is probable the habit would afford not only no protection but an opening for invasion."

The supposed disinfectant action of tobacco smoke on bacteria in air has been investigated under controlled laboratory conditions. Twort & Baker (1940) studied the effect of exhaled cigarette smoke on *Escherichia coli* [colon bacilli] in the air. Cigarette smoke had no apparent effect on the bacteria, although a smoke generated from cardboard damped with a 2% solution of potassium nitrate and fired proved highly lethal to the organisms. Kliewe & Oberfeld (1950) undertook a study to determine whether the old custom of smoking a room to free it of contagion had any merit, but they neglected to draw any definite conclusions from their experiments. Smoke from tobacco, paper, straw, hay, and asthma powder were all found to have a bactericidal action against suspensions of *B. prodigiosum, Esch. coli,* and *Sarzina lutea* sprayed into a closed room by means of a hand atomizer; no very marked differences between the various types of smoke were apparent.

During the years 1907-1909, de Berrmabon (1910) studied the possible prophylactic effect of smoking on cerebrospinal meningitis using French army personnel. Of 286 soldiers questioned, 94.4% were smokers, and of 49 cases of meningitis during the period of study, 44.1% were non-smokers and 30.2% were only occasional smokers, from which this author concluded that smokers had a relative immunity to this disease. Bogen (1937) suggested that perhaps a slightly increased resistance against tuberculosis might be afforded by the relatively harmless anthracosis resulting from the dust found in tobacco smoke. In general, however, modern epidemiological studies have not revived the once widely-held belief that tobacco or smoking is prophylactic in infectious diseases.

A beneficial or curative action of tobacco or smoking has been reported for the following infectious diseases:

Common Cold. "A few pinches of tobacco snuff at the commencement of a cold is a popular remedy" (Thomson & Negus, 1937).

Rabies. The use of tobacco in hydrophobia was based on the analogy between the spasms of this disease and those of tetanus (see below). Sigmond (1838e) had no confidence in the power of tobacco to arrest the disease, but inclined to the view that tobacco enemas or injections would make the last hours of life more supportable. Haskell (1859) recommended the use of tobacco smoke *per rectum* in the treatment of hydrophobia.

Typhus. Wertheim (1851) claimed that in the prodromal stage of typhus and other exanthematic processes, 1 mg. of nicotine or coniine would produce a significant and frequently lasting improvement of all the symptoms; the lesser the degree of symptoms, the greater the dose needed to produce improvement.

Erysipelas. J. G. Stephenson (1857) asserted that tobacco was most reliable in subduing erysipelatous inflammation; he covered the inflamed surface with wet tobacco leaves, which he permitted to remain until much nausea was produced.

Furunculosis. Jausion and co-workers (1940) claimed to have obtained complete skin restoration in 11 cases of furunculosis by application of a tobacco-infusion agar mixture (for details, see above under *Skin Diseases*).

Tetanus. Edmund Gardiner in "The Trial of Tobacco" (1648) wrote: "The suffumigation of tobacco being taken, is a good medicine for the starknesse or stiffnesse of neck called tetanus, for any pains or aches in the body proceeding of the cause that tetanus doth" (quoted by Sigmond, 1838d). Although Sigmond himself did not feel that any medicine was dependable in tetanus, and expressed his belief that spontaneous recovery underlay at least some of the claims for the therapeutic efficacy of tobacco, a considerable number of case reports in the literature testify to the use of tobacco, and later of nicotine, in this condition. Duncan (1815) reported having cured a case of tetanus with the aid of tobacco-smoke enemas. O'Beirne (1822), Anderson (1824, 1826), S. Jackson (1826), Smart (1830), Cavenne (1836), and Bullock (1841) described cases of tetanus successfully treated by tobacco administered by local application to the skin in form of poultices and cataplasms (Anderson), by applying a strong tobacco docoction to the open wound through which the infection had gained access (Jackson), by injection of tobacco *per anum* and *per vaginam* (Smart), or by tobacco enemas (Cavenne; Bullock). The progress of the cure was described by Smart: "The patient became pale and cold; tremor of the extremities; a small feeble pulse; anxiety and oppression at the praecordia, with efforts to vomit, soon followed by powerful vomiting, and a gradual opening of the jaw."

Simon & Clapton (1858) treated a case of traumatic tetanus with nicotine, 1/12 minim hourly, increasing gradually to 1/6 minim and later to 1/4 minim hourly. Each administration produced marked relief of muscular spasm for a short period. Untoward effects of nicotine included giddiness, profuse perspiration, and nausea. Nicotine therapy was continued over a period of 7 days, and the patient recovered. Haughton (1862) reported three cases of tetanus in which nicotine worked to advantage: in the first case, nicotine relieved the agonizing pain and relaxed the spasms, but the patient died from double pneumonia; in the second case, 26.4 grains of nicotine were administered over 11 days; in the third case, nicotine in doses of 1-2 drops in sherry and water was given as needed over a 4-day period (total, 54 drops or 32.5 grains), the nicotine relieving the spasm of the muscles and the patient eventually recovering. Tufnell (1863a, b) treated his case of tetanus by oral nicotine therapy lasting 6 days; repeated doses were necessary, since spasms tended to return every few hours (the dose used must have been quite large, for the author states that in 40 seconds after administering the first dose, the whole surface of the patient's body became covered with sweat). Later, before the Surgical Society of Ireland, Tufnell stated that he had used nicotine on three occasions in treating tetanus, twice successfully and once unsuccessfully. Morgan (1869a, b) communicated to this same Society the case of a boy of 15 with a compound fracture of the great toe in whom tetanus developed; treatment included repeated doses of 1/23 drop of nicotine plus 5 drops of Liq. Morph. over a period of 6 days, with subsequent recovery of the patient. In the ensuing discussion, Babington stated that he once gave 1/3 drop of nicotine in a case of traumatic tetanus, but abandoned it in consequence of the frightful depression induced. Ogle (1864a, b) reported having administered nicotine in a case of traumatic tetanus without averting a fatal termination.

The early literature on this subject was reviewed by O'Beirne (1822). Later, Hare (1885) discussed the use of tobacco in the treatment of tetanus.

Plague. Mallanah (1918) advocated the use of tobacco leaves on the floor in plague areas to destroy the plague-carrying fleas, and described an experiment in which he arranged to "tobacco" 52 houses while using 52 others as controls. Out of the controls, 7 cases of plague occurred, while of the "tobaccoed" houses, in only one did a case of plague occur, and the author explained this as due to insufficient use of tobacco.

Tuberculosis. Ruef (1844-45) stated that tuberculosis was rare among tobacco workers who had been employed from infancy in tobacco manufacture; moreover, that this disease progressed much less rapidly in those who brought to their work an already developed germ. Melier (1844-45), however, found no evidence of a beneficial effect of tobacco manufacture on tuberculosis in the workman, and Poisson (1881) considered that the curing of tuberculosis by manufacture of tobacco was an illusion.

Cock (1889) observed that chewing tobacco from

about the ages of 20 to 30 by those predisposed to tuberculosis of the lungs, would prevent its development. He believed it did this by counteracting the plethoric conditions of adolescence and also by acting locally as a curative agent in destroying the tubercle bacillus. Jankau (1894) stated that smoking should be encouraged in the early stages of tuberculosis for its antibiotic action on the tubercle bacillus.

On the theory that a pulmonary antisepsis in conjunction with an active and prolonged pulmonary hyperemia might give therapeutic results in tuberculosis, Karyophillis (1951) employed cigarettes containing 5-10% flowers of sulphur added to the tobacco in the treatment of 42 cases of chronic pulmonary tuberculosis; 8-10 cigarettes were administered per day over 4-12 months. In 4 cases, no results were obtained; in 5 cases, the result was very poor or static; but in the other 33 cases, great clinical and radiologic improvement was said to have been brought about, complete clinical recovery being attained in many cases.

Venereal Disease. In *France Antarctique* by Thevet (Paris, 1558), there is a woodcut representing a man being cured of yaws by suction: one of his attendants, a naked Indian, holds in his mouth what appears to be a smoking cigar or cigarette. According to *The Lancet* (*2*: 1480, 1912), the sores of yaws and syphilis were washed out with tobacco juice in South Carolina in the 18th Century, and "we are at liberty to infer that smoking had for long been resorted to as a cure for these diseases. There can be but little doubt that at the time of its introduction into England, smoking was regarded by the mass of the people as a sign that the smoker was endeavoring to cure himself of a nameless complaint."

Intermittent Fever [*Malaria*]. Wertheim (1851) claimed curative effects for 30 mg. doses of nicotine in intermittent fever.

Hjorth (1852) reported that a young female suffering from intermittent fever was treated as follows: a leaf of tobacco as large as the hand was soaked in three or four pints of goat milk overnight; on the next day, 2 or 3 spoonsful were administered to the patient, the bad taste preventing taking of the remainder. Non-fatal nicotine poisoning developed. C. S. Shaw (1878) reported the case of a 35-year-old man with malaria who accepted a prescription from a friend who warranted its efficacy. It consisted of 1/3 pound of refuse tobacco (stems and leaves) and 2-3 heads of garlic steeped in a pint of brandy; the dose was one tablespoonful 3 times a day. The patient followed the directions for 3 days, and ultimately died of nicotine intoxication.

Diseases of Allergy: *Asthma.* In former years, tobacco was recommended as a remedy for relief of asthma on account of its antispasmodic effects (W. S. Thomas, 1928). "In disordered respiration." wrote Sigmond (1838f), "this herb obtained the well-merited confidence of the older physicians, in cases [of spasmodic asthma] where no organic alteration has occurred. It has, however, nearly fallen into neglect, from which state it will most probably revive, for it has lately been tried to a very great extent, and with no small success, under a false name [a spirituous tincture of the tobacco having been supplied to physicians under the name of *Lobelia inflata,* which latter drug was then in great demand]. My own experience had led me to its frequent employment; nor did I discover for some time the artifice which had been practiced. It, however, induced me to place great reliance on the aetherial tincture of tobacco, to mitigate the paroxysms of spasmodic asthma. It must, however, be remembered that where the lungs are diseased, it is capable of exacerbating the complaint, and that it always demands the careful discrimination and judicious watchfulness of the medical man." Sée (1869) also held that the actions of tobacco were antagonistic to asthma; hence, he recommended the moderate use of tobacco by asthmatics but at the same time cautioned that immoderate use provoked attacks. P. Smith (1890) recorded the case of a woman who had used tobacco for years for the relief of asthma, who eventually developed tobacco amblyopia.

The mixture of tobacco and leaves of the thorn apple (*Datura stramonium*) has, from olden times, been used as a remedy for asthma in the form of so-called "asthma cigarettes". Lickint (1925c) believed that the nicotine of the tobacco weakened rather than reinforced the bronchial antispasmodic action of *Datura stramonium,* and therefore, advised inhaling the smoke of burning stramonium leaves alone.

Barach and his colleagues (1952) studied the effect of cigarette smoking in patients with bronchial asthma and pulmonary emphysema. In some of these patients, in whom coughing was due to inhaling cigarette smoke, there resulted expectoration of considerable amounts of bronchial secretions, and a marked relief of dyspnea took place, with a concomitant rise in vital capacity and in maximal breathing capacity. According to these authors, cough thus

produced should not be interpreted simply as an irritative phenomenon, but must be viewed also in the light of its physiologic use as a factor in drainage. If bronchodilating drugs have separated mucus from the bronchial wall, and this is not spontaneously followed by expectoration, deliberate coughing is recommended. Smoking 3 cigarettes in succession also produced, in some cases, increased bronchospasm, demonstrated by decrease of the vital capacity and maximal breathing capacity; but the point at issue was not to evaluate the harm or the advantage of smoking, but to emphasize the functional significance of either a natural or stimulated cough when it is followed by expectoration of mucus and pus from the bronchi.

Urticaria. Marcuse (1899a, b) successfully used a nicotine soap in the treatment of 4 cases of urticaria (for details, see above under *Skin diseases*).

Collagen Diseases: *Rheumatism.* Melier (1844-45) reported that Berthelot had informed him that a cataplasm made of linseed meal and decoction of tobacco promptly assuaged rheumatic pain and effected a cure as quickly as any of the modes of treatment commonly used in that disease. Workmen in tobacco factories were convinced of its efficacy in rheumatic pains, knowing of no better remedy than a good sleep on a heap of tobacco. But Ruef (1844-45) denied that the emanations of tobacco were efficacious against rheumatism in tobacco workers.

In the case, described by Polko (1854), of a man who treated rheumatism in his legs by applying dry tobacco leaves moistened with honey, non-fatal nicotine poisoning resulted.

EPILOGUE

Tobacco made its world-wide conquests under guise of a drug. But the dangers attendant upon its therapeutic use, as well as the discovery of safer, more efficacious, and often more specific remedies for many of the diseases in which tobacco was once employed, have taken *Herba Panacea* out of the pharmacopoeias, and, indeed (in spite of more scientific therapeutic tests by some modern physicians), generally out of medical practice as well. Tobacco as a drug is now primarily of only medico-historical interest.

Or is it? Have we not forgotten that most essential and characteristic of all the pharmacological—and hence therapeutic—properties of nicotine: its unique biphasic action on the higher, if not the highest nervous centers of man? Have we not forgotten that, by virtue of this effect, tobacco has been used and celebrated for over three centuries as what we are now pleased to term a "tranquilizing" drug —a "tranquilizer", moreover, with perhaps a higher therapeutic index of safety and a lower incidence of dangerous side-reactions than any white tablet or colorful capsule similarly chronically used. If such a view appears to be elevating—or degrading —or returning tobacco to its ancient honorable place in the pharmacopoeia, we must confess it is all a matter of definition. A pipe or cigarette which soothes and relaxes, may be said, when smoked by a "patient", to "tranquilize". That many millions of such "patients" also derive pleasure from this particular tranquilizing drug is at least a therapeutic virtue which smoking shares with very few other drugs, past or present. Thus, we may suggest, in a conclusion which has perhaps something more than medico-historical interest, that tobacco is either a tranquilizer with the not unimportant side-effect of inducing pleasure, or it is a "pleasure-drug" (as the Germans graphically term it) with the very useful side-effect of tranquilizing. With the world what it is; and, judging from the consumption of tobacco in past ages, what it was; and judging from our newspapers, radio, and television, what the world is likely to be—we may well be grateful that we have such a drug as tobacco among what we should call, in paraphrase, our "Old and Nonofficial Remedies."

Editor's Note: A full bibliography will be included with reprints, copies of which may be obtained from the authors.

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Idiopathic Hemachromatosis Treated by Massive Venesection

Report of a Case

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HEMACHROMATOSIS is an uncommon, chronic and progressive disorder of iron metabolism characterized clinically by the triad of cirrhosis, diabetes and bronze pigmentation of the skin. It is basically an iron storage disease and the pathogenesis depends upon the overloading of the body with iron. The etiology of hemachromatosis is not factually established but the metabolic error is accepted as being inborn. There is evidence that iron absorption is increased and there is probably failure of the duodenal mucosal blocking mechanism[1]. The normal body content of iron totals three to five grams. In hemachromatosis the iron content is in the range of 20-60 grams.

Treatment in the past has concerned itself with the hepatic cirrhosis, diabetes and heart disease. Medicinals to decrease iron absorption and increase iron elimination have in recent years received some attention only to be discarded as of no practical value[3]. The absence of an excretory path for iron in man and the knowledge that blood contains 50 mg. of iron per 100 c.c. led to the idea of repeated venesection as a means of iron elimination. The abnormal iron deposits are known to be readily available for hemoglobin synthesis[4]. In 1947, Davis and Arrowsmith[3] began their series of cases treated with massive venesection, the report leading to use of phlebotomy in the case presented below.

This 47 year old white male, truck driver, was admitted to the Winchester Memorial Hospital May 18, 1956. He gave a story of excellent general health until about two weeks prior to the date of admission. He at that time became ill with an acute upper respiratory infection with chills, fever, cough, generalized aching and malaise. There was some nausea, occasional episode of vomiting and occasionally some diarrhea. His local doctor had given him several forms of medication with some symptomatic relief. After three days of treatment his appetite returned and he felt fine but he had lost 10 pounds in the time between onset and remission. About four days prior to admission the patient had had a relapse of generalized aching through the flanks and across the abdomen with gas, distention, bloating and anorexia. Occasional vomiting had again appeared. The systems review was, otherwise, negative. Physical examination revealed a man who appeared to be about his stated age, temperature 96.8, blood pressure 130/80, pulse rate 90, respirations 18. It was remarked at the time of admission that he looked sick and the color of his face was peculiar. This same discoloration applied to the forearms and areas of the trunk. This color change was one of a demarcated slatish hue more suggestive of argyria than anything else that came to mind at that time. The other positive findings were limited to the abdomen which was large and firm, and a rather nodular liver that was down perhaps five fingers into the right flank and extending across the epigastrium could be easily demarcated. The spleen was not palpable.

The significant laboratory work showed WBC 16,550, 76 pmn., 24 lymph., hemoglobin 14.4 grams, RCV 44.5. Urine urobilinogen 1:200. bile negative. Urine specific gravity 1.026, albumin and sugar negative, many WBC's in the sediment per high power field. Serology negative. Urine culture produced Escherichia coli. Blood urea nitrogen 22.8 mg.%, fasting sugar 109 mg.%, amylase 140 S. units, bilirubin .9, cephalin floc. 2 plus, alkaline phosphatase 20.4 K-A units. BSP 12%. Stool negative for bile, positive for occult blood. (The patient apparently had a prostatitis to account for the pyuria which cleared on chemotherapy.) Total protein 6.5 grams, albumin 39%, alpha globulin 5%, alpha 2 20%, beta 18%, gamma 18% (paper electrophoresis). X-rays were made of the chest, abdomen, gall bladder, upper gastrointestinal tract, colon and kidneys, none of which showed remarkable abnormality with the exception of a rather faint shadow of the gall bladder on that test.

On May 30, 1956 a liver biopsy was done through an abdominal incision and the pathologic report stated "the section of liver showed an essentially normal architecture except for a definite increase in the fibrous tissue at the portal zones with

some lymphocytic infiltration. In a few zones there is some suggestion of bile duct proliferation. The main feature of this section is a marked deposit of brown pigment, presumably the blood pigments hemofuscin and hematoidin. The pigment is found in the hepatic cells, in the Kupffer cells and in indeterminate cells in the connective tissue. A combination of this excessive amount of iron pigment with the portal zone fibrosis is characteristic of the clinical entity known as hemochromatosis."

The patient had recovered from the malaise which caused his admission to the hospital. He had been on a high protein, low salt diet with vitamin supplementation and bed rest. A low grade fever diminished toward the end of the hospitalization to insignificance. In the last week of his hospitalization there was removed 2500 c.c.'s of blood reducing the hemoglobin to 11.9 grams and RCV to 36%. Arrangement was made for venesection of 600 c.c. of blood every week. In July of 1956, the patient was returned to the hospital where it was found his bromsulfalein was 2%, WBC 9,700, hemoglobin 13.6 grams, RCV 42. In August, 1956 the patient was re-admitted and it was noted the liver was definitely smaller being 2 to 3 fingers below the costal margin. He was symptom-free. Bromsulfalein was 7%. Cephalin floc. was plus-minus. WBC 10,000, hemoglobin 14 grams. In February, 1957, the patient was re-admitted again symptom-free and now subsequent to 36 venesections averaging 600 c.c.'s each. It is remarked that he felt fine, appetite excellent, digestion good, bowels regular, weight gain of 20 pounds and working full time. The liver at this time was found to be about 3 fingers below the costal margin, non-tender but quite firm. Bromsulfalein was 4%, cephalin floc. plus one, hemoglobin 13.8 grams, RCV 43. On September 20, 1957, the patient was re-admitted. The skin pigmentation could now be considered unnoticeable. He was symptom-free and working full time. Weight constant, appetite good. Liver firm and about 1" below the costal margin. Laboratory findings: hemoglobin 14.5 grams, alkaline phosphatase 10.9, hematocrit 47%, bromsulfalein 3%, total protein 6.5, albumin 51%, alpha$_1$ G. 6%, alpha$_2$ G. 16%, beta G. 16%, gamma G. 11% cephalin floc. negative. He was bled for the 55th time (total 33,000 c.c. of blood). For six months the patient had been returning at intervals of every two weeks instead of weekly.

COMMENT

A long enough time has not passed since inception of phlebotomy for hemachromatosis to develop a definite opinion relative to its long term benefits. However, Finch and Finch[5] presented statistics based on the review of 787 cases of hemochromatosis that clearly define the poor prognosis prior to venesection. According to their publication the average life expectancy after the onset of symptoms is 4.4 years. If diabetes appeared the life expectancy even with the best control possible was only three years. Cirrhosis of the liver accounted for 45% of the deaths and heart failure for 30%. Diabetic coma which prior to 1935 accounted for 50% of the deaths[3] accounted for less than 5%. The excessive iron deposition in the cells and the resultant damage is felt to cause all the symptomatology although experimental attempts to reproduce pathology and symptoms by iron injection has not been successful. Finch and Finch conclude that the factor of time is the reason for the lack of experimental correlation in that two to three decades of excessive iron deposition occur in the human while no more than two years have been observed in the animal experiments.

Of 17 collected cases by McAllen[3] all showed the response, as did our patient, of increased sense of well being, decrease in liver size, decrease or disappearance of skin pigment and disappearance of liver iron by serial biopsy. All were maintained at their usual work throughout treatment.

Phlebotomy is carried out at intervals of one or two weeks, removing 300-600 c.c.'s of blood each time. The criterion for cessation of treatment requires the appearance of a significant anemia (10-11 grams hemoglobin per 100 c.c). In McAllen's series this occurred in from one to four years and involved removal of from 16 to 70 liters of blood[3]. Even larger amounts had been removed in several of the cases in the series of Davis and Arrowsmith. The appearance of the anemia indicates complete removal of the excessive iron deposits. McAllen recommends blood letting once or twice annually after this stage is reached. It is of interest that the early fear of serum protein deficiency that led Davis and Arrowsmith to replace plasma in several of their early cases never materialized and is not advised by any writers on the subject [2,3,5]. Diabetes was favorably affected so far as control measures were concerned in several of the cases, requiring less insulin and remaining more stable[2,3]. In the one case of heart failure in McAllen's series the patient recovered from the decompensation and in the subsequent three years of phlebotomy treatment did not again become decompensated[3].

The possibility of arresting the disease by phlebotomy and removal of excessive iron seems good.

SUMMARY

A case of idiopathic hemochromatosis treated for 17 months by massive venesection with good remission is reported. A review of current literature is presented.

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Medical Grievance Committees

More than 1,100 American county and state medical societies now have "medical juries"—grievance committees organized to mediate differences between doctors and patients. The accomplishments and aims of grievance committees are outlined in a special article and editorial in the April 5th Journal of the American Medical Association.

Medical grievance committees are not really new. Since 1871 the committee on ethics and discipline of the Massachusetts Medical Society has been mediating the complaints of patients. What is new is the spread of the committees across the nation. During the last 10 years more than two thirds of the county societies and all the state and territorial association have organized them.

Serving on these committees are between 5,000 and 10,000 physicians who fearlessly "judge complaints routinely in the twin light of public interest and professional service."

On one hand a committee may rule in favor of the patient, saying, for instance, about the doctor involved, "Fee for prenatal visits considered excessive." On the other hand, it may decide in favor of the physician. One example is that of the patient who protested that he was charged $40 for "just one office visit." Investigation showed that, at his own request, the visit entailed a thorough examination including a fluoroscopic study, electrocardiogram, and extensive laboratory work. When he understood what the fee covered, he withdrew the complaint with apologies.

The majority of complaints against doctors are "due not to incompetence or greed but to misunderstandings—misunderstandings which could have been dispelled quickly if there had been an opportunity to determine the cause in frank discussion."

"So many complaints have been caused by a misunderstanding of the basis for a doctor's fee that grievance committees spend a good deal of time emphasizing the importance of discussing costs before, and itemizing bills after, medical service."

The A.M.A. has taken a double-barreled approach on fees—urging doctors to discuss fees before service and calling upon state and county societies to crack down on the few doctors who have been overcharging.

Most grievance committees do not mete out punishment when they find a complaint justified. A Colorado spokesman has pointed out that "You cannot be prosecutor, judge, and jury all in one body." When disciplinary action is needed, it is usually referred to the appropriate judicial body of the association.

Most of the committees are composed of physicians only, but some include laymen—lawyers, ministers, and businessmen. Inclusion of laymen is still in the experimental stage, according to the A.M.A. Council on Medical Service. "But they may serve to strengthen community trust in the impartial attitude of the committee. . . ." However, one West Coast woman was quoted as saying, "In our community we know the doctors are working to protect us, not other doctors' careers."

One way to help the community know about the grievance committees is to publicize them. The Council on Medical Service has pointed out that the service "cannot succeed unless the public knows of its existence and understands how to use it."

The Journal editorial said the grievance committee is "here to stay as an integral part of our profession. In the years ahead only technique may need refinement. . . ."

Postpartal Fibrinogenopenia

An Unusual Case

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INCREASING ATTENTION is being paid to cases of acquired afibrinogenemia and fibrinogenopenia during pregnancy[1-9]. It has been established that this blood clotting defect is frequently associated with other clotting fraction abnormalities[2]. Most of the cases reported with acute hemorrhagic episodes have occurred during labor, at delivery, or in the immediate postpartum period[1-7].

Few cases of postpartal afibrinogenemia are reported[3,7]. One theory regarding its cause involves the destruction of fibrinogen by a fibrinogenolysin[12,13]. Another involves the formation of small intravascular clots following infusion of intrauterine thromboplastic substances with resultant depletion of fibrinogen[11,15].

This report deals with a case of gastric hemorrhage occurring on the fourth postpartal day in a secundagravida who had hepatitis and a dead fetus in utero for three days. After correction of the acute fibrinogenopenia, she developed a high antithrombin titre.

This case is presented as another example of late puerpueral bleeding as a result of fibrinogenopenia and the possibility of other associated clotting defects.

CASE PRESENTATION

M. Y., a 32 year old para 1-0-1, gravida II, was admitted to the obstetrical service on March 30, 1957, with a diagnosis of acute gastritis. Her expected date of confinement was April 27, 1957. Her past history revealed that at an early age she had had scarlet fever and has had defective hearing since. Reportedly, she had hypothyroidism and had been taking a grain of thyroid daily. Her prenatal history and physical examination on March 6 were normal.

The present illness began on March 16, with symptoms of indigestion and an upper respiratory infection. On March 20, the patient received her second poliomyelitis vaccination. On March 28, two days later, she was seen with complaints of general malaise, intermittent chills and fever, nausea and vomiting. At this time, a physical examination was essentially normal and her illness was diagnosed as a "viral influenza". One dose of 25 milligrams of Thorazine was given as symptomatic treatment. Two days later, the patient was admitted from the emergency room where she complained of nausea and vomiting without diarrhea of four days duration.

Hospital Course

On admission, the physical examination revealed an essentially normal intrauterine gestation of 30-32 weeks.

From March 30 to April 3, she was treated conservatively and symptomatically with improvement. On April 3, she developed an upper respiratory infection, herpetic perioral lesions and icteric sclerae. On April 4, generalized jaundice was noted. The liver was not palpable and there was but minimal right upper quadrant tenderness. Electrolyte studies were done daily and intravenous fluids given accordingly. On April 6, the fetal heart sounds were no longer heard. On April 8, the patient spontaneously delivered a macerated stillborn infant after a three hour labor, under pudendal block anesthesia. She sustained a second degree perineal laceration which was repaired without evidence of any unusual bleeding.

The postpartal course was uneventful for three days. The patient improved and had increased urine output and no nausea or vomiting. The uterus remained well contracted and she had normal lochia rubra.

On April 11, the fourth postpartal morning, she developed severe hematemesis, and went into shock. The blood loss was estimated at 1000 cc. A cut down was made and 500 cc. of blood rapidly infused. A fibrindex test* showed no clotting. The patient was given another unit of blood and then four grams of fibrinogen intravenously. Blood clotting checked by fibrindex and gross blood clot retraction had now returned to normal. The cut down was kept open for two days and the patient was given penicillin and

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*Ortho Pharmaceutical Company. Trade name for a Semi Quantitative Test for fibrinogen which involves essentially adding thrombin to plasma.

vitamin K_1 oxide. Thereafter, the fibrindex test continued to be abnormal, but the clot retraction and gross blood clotting were normal. On April 12, she received two grams of fibrinogen and one unit of fresh blood and on April 13, she received one gram of fibrinogen and one unit of fresh blood.

Her clinical condition improved and the jaundice cleared rapidly. On April 22, a gastrointestinal series and barium swallow were normal. She was discharged home on May 6, after continued improvement.

The patient was readmitted to the hospital, six weeks later on June 26, with symptoms of nausea, vomiting, myalgia, general malaise and apprehension. She also had icterus. Treatment consisted of complete bed rest, a high protein, high carbohydrate diet, and vitamin therapy. She developed clinical jaundice without evidence of hepatomegaly and her total serum bilirubin ranged up to 10.1 milligrams per cent. The remainder of her laboratory studies were consistent with hepatitis. She continued to improve on bed rest and supportive therapy until the jaundice completely cleared and the serum bilirubin again became normal. After continuous improvement, she was again discharged home on bed rest and chair rest.

Laboratory Studies

After blood transfusion and fibrinogen administration, the daily clot retraction and clot stability were normal. Daily fibrindex tests continued to show evidence of fibrinogen deficiency. Repeated platelet counts, bleeding and clotting time determinations were normal. The prothrombin times (Quick, one stage) ranged from 25-15 with a control of 15. The initial serum bilirubin on April 4 was 10 milligrams per hundred cubic centimeters total and 6 milligrams per hundred cubic centimeter direct, increasing to a maximum of 25 and 13 milligrams per hundred cubic centimeters respectively on the eleventh of April, then gradually subsiding to normal in the next 30 days. Alkaline Phosphatase ranged from 9.8 Shinowara-Jones units on the 7th of April to a maximum of 19.8 on the 20th of April and then returned to normal by the 29th of April. The patient's plasma and blood were checked for evidence of a fibrinolysin, fibrinogenolysin, and circulating anticoagulants on two occasions, and none was evident. Her blood type was A, Rh positive. The Rumpel-Leede and erythrocyte fragility tests were normal. The presence of an antithrombin factor was noted by assays* done on April 20 and on May 13, the day of discharge. Both showed high titres, with some improvement in the latter. Her fibrinogen level on discharge was 208 milligrams per hundred cubic centimeters.

The laboratory studies during the second admission were compatible with hepatitis. The alkaline phosphatase ranged from 16.8 Shinowara-Jones units on June 28 to 32 units on July 5, and then returned to normal by August 5. Total serum bilirubin ranged from 1.23 milligrams per hundred cubic centimeters to 10 milligrams on July 8 and then returned to normal range of 1.73 by August 17. The BSP test showed 70% retention on June 27 and returned to normal by July 15. Fibrindex tests persistently showed low fibrinogen levels. The antithrombin titre was still present on the day of discharge.

DISCUSSION

There are many facets to this case. The hepatitis, the dead fetus in utero for three days, an uneventful delivery followed in three days by an acute gastrointestinal hemorrhage and shock. The following sequence of events might explain the clotting defect. This patient had a subclinical hepatitis and then five days later developed jaundice. This left her liver with impaired fibrinogen production. The dead fetus in utero for three days added its insult, causing fibrinogen depletion, supposedly by infusion of thromboplastic substances[1,14,15]. When delivery occurred, there was no unusual bleeding because the critical fibrinogen level had not been reached. It is postulated that postpartally there was some increased tissue thromboplastic substance[1,11,14,15] from the involuting uterus or a fibrinogenolysin[12,13] causing depletion of fibrinogen to a critical level. The resultant gastrointestinal hemorrhage occurred from a congested gastric mucosa, irritated by previous vomiting and wretching, secondary to the liver disease.

After the administration of fibrinogen, the bleeding stopped, but an antithrombin titre developed. This has been explained theoretically as due to the body's reaction to the intravascular clotting or to the administration of fibrinogen[8].

This case illustrates the importance of determining fibrinogen levels during pregnancy, especially in the presence of liver disease, the dead fetus syndrome, and other conditions contributing to fibrinogenopenia. Other clotting defects such as antithrombin factors are possible and should be investigated.

*I wish to thank Dr. H. O. Singher of Ortho Research Foundation for his cooperation in doing these studies.

SUMMARY

A case of hepatitis with retention of a three day dead fetus in utero and late postpartal fibrinogenopenia with resultant gastrointestinal hemorrhage, shock, and the development of a high antithrombin titre is presented. Attention is called to the possibility of the many factors which might cause fibrinogenopenia: liver disease, a dead fetus, thromboplastic substance infusions and others.

Fibrinogenopenia is not of necessity a condition which occurs at delivery or in the immediate postpartal period, but may occur later[3,7]. The possibility of antithrombin factors or other clotting defects should be kept in mind and investigated.

It is logical and advisable to determine the fibrinogen level of every woman sometime during her pregnancy. This would serve not only as a screen for fibrinogen defects, but as a baseline for any clotting defects which might occur later in pregnancy.

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Care of Burns

To minimize pain and suffering from burns—which cause more injury and death among children than any other accident—parents need to know how to identify and treat them.

Some rules, listed in the July Today's Health, an American Medical Association publication, are:

—Because youngsters grasp anything within reach, never allow conditions to exist which lead to accidents; keep matches from children; keep pots from the edge of the range, and keep youngsters from fires.

—Determine quickly the degree of burn—first degree, the skin is red; second, the skin is blistered; third, the skin is charred.

—For first or simple second degree burns, coat the affected area with an antiseptic ointment or olive or baby oil. This relieves pain and prevents the skin from cracking and drying out.

—For deep second and third degree burns, call a doctor immediately, since shock and infection may occur. A layman should not try to treat either.

The Efficacy of Cecostomy in Selected Cases of Paralytic Ileus

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RUPTURE OF THE CECUM following mechanical obstruction of the distal colon is uncommon but not rare in the experience of most general surgeons. Ravid[4] reported 81 cases of diastatic rupture of the alimentary tract secondary to a distal obstruction, and 53.8 per cent of these occurred in the cecum. Lowman[3] collected 79 reported cases of rupture of the cecum and added 19 cases from personal experience. The mortality rate of Lowman's series was 75 per cent, despite all forms of surgical and medical therapy.

On the other hand, rupture of the cecum resulting from a paralytic ileus is extremely rare. In 1927, Hunt[2] referred to paralytic ileus as a "serious menace to life" if not relieved. He proposed the use of enterostomy, or preferably cecostomy, for relief in the "resistant case". Cheever[1] several years later advocated the "operative evacuation of the small intestine in paralytic stasis".

The paucity of recent reported cases of rupture of the cecum secondary to paralytic ileus is probably the result of Wangensteen's[5] contribution in 1931 of the principle of alimentary tract decompression by the use of an indwelling tube. It is unusual for this method of decompression to be ineffectual, and even more unusual if it is used in conjunction with the administration of parasympathomimetic drugs. The occasional usefulness of operative intervention for decompression of the cecum in cases of paralytic ileus is also virtually unreported in the recent literature.

MATERIAL

The present report is the result of an analysis of five cases observed at the Cincinnati General and the Veterans Administration Hospitals between 1955 and 1958. Each of the cases was correctly diagnosed as one of paralytic ileus, and each had been given adequate trials of alimentary decompression by various types of indwelling tubes. Parasympathomimetic drugs were given in three cases as adjuncts to decompression therapy in an effort to stimulate peristalsis. However, when these forms of therapy failed and the cecum continued to enlarge as noted by serial roentgenograms, a cecostomy was performed in each case. This was done as an emergency measure to prevent perforation of the progressively enlarging cecum and to prevent the almost fatal prognosis should perforation of the cecum occur.

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CASE REPORTS

Case 1 (R. K. #314276). A 69 year old white male, admitted February 6, 1955, with a fracture of the right tibia and fibula. The fractures were reduced and the leg placed in a cast. The general



Figure 1

condition was otherwise satisfactory. On the fourth day following admission, abdominal distention developed. Roentgenograms revealed a bowel pattern of paralytic ileus. A Levin tube was placed into the stomach without relief. Sigmoidoscopy and barium enema studies revealed no colon obstruction. Cantor

tube intubation and Prostigmin® therapy did not relieve the progressive distention. By the ninth day, serial roentgenograms revealed the cecum to be tremendously dilated. (Fig. 1) An emergency cecostomy was then performed under local anesthesia. On the anterior taenia, there were five areas of gangrene approximately 6 millimeters in diameter. One of these areas perforated as the cecum was exposed. The gangrenous areas were inverted and a mushroom catheter placed into the cecum. The cecum immediately decompressed to approximately one-half its previcus size. The patient fully recovered, and the wound was healed when, three weeks later, he suddenly expired from a massive pulmonary embolus as found at necropsy. The cecal measurement at greatest diameter in Fig. 1 is 16.5 cms.

Case 2 (D. C. #199-1-96). An 82 year old white male, admitted February 24, 1955, with an oblique fracture of the shaft of the left femur. After four days in traction, a Kuntscher nail was placed into the femur. The patient did well until the third postoperative day when abdominal distention was



Figure 2

noted. Roentgenograms revealed a bowel pattern characteristic of paralytic ileus. Small bowel intubation, enemas, and Prostigmin® were without benefit. Sigmoidoscopy and a barium enema eliminated the possibility of an obstructive lesion in the colon. A serial roentgenogram taken on the fourth day of the distention revealed the cecum to be markedly dilated. (Fig. 2) An emergency cecostomy was performed under local anesthesia. A 4 cm. tear in the serosa of the anterior taenia, was found at operation. The cecum was decompressed approximately 60 per cent by a mushroom catheter, and the area of the serosal tear was repaired. The patient recovered fully. The cecal size in Fig. 2 is 17 cms. at its greatest diameter.

Case 3 (S. S. #325390). An 85 year old white female was admitted January 11, 1956, from a rest home with marked abdominal distention of three days duration. The admission diagnoses were thrombophlebitis of the left leg, dehydration, cardiac failure, and paralytic ileus. Plain roentgenograms,



Figure 3

barium enema, and sigmoidoscopy confirmed the last diagnosis. Progressive distention continued in spite of intubation of the small bowel and enemas. By the third day of admission, serial films revealed a progressive increase in the size of the cecum. (Fig. 3) An emergency cecostomy was performed under local anesthesia. Two small gangrenous areas were noted in the cecal wall at operation. The fibrers of the anterior taenia were also markedly stretched and the bowel wall was a dusky color in additional areas. Following partial decompression of the cecum at operation and inversion of the gangrenous areas, peristalsis returned within two days, and the patient

made an uneventful recovery. The cecal size in Fig. 3 is 12 cms.

Case 4 (E. K. #14837). A 67 year old physician was admitted for closure of a perforated duodenal ulcer on May 22, 1957. The patient was ambulatory on the second postoperative day. He did well until



Figure 4

the ninth postoperative day, when marked abdominal distention developed. There was no evidence of peritonitis on examination. Despite gastrointestinal intubation and Prostigmin® therapy, the abdominal distention progressed. Sigmoidoscopy and barium enema revealed no colonic obstruction. Serial roentgenograms revealed the cecum to be markedly distended by the fourth day. (Fig. 4) A cecostomy under local anesthesia was performed. The wall of the cecum was dusky in color and very thin. No areas of frank gangrene were noted, however, and there was no serosal tear in this case. The patient made an uneventful recovery. The size of the cecum in Fig. 4 is 21 cms. in diameter.

Case 5 (E. H. #354897). A 60 year old colored female, admitted on March 3, 1958, with severe pneumonia of the right lower lobe, toxic hepatitis, and marked abdominal distention. In spite of nasogastric intubation, the abdominal distention increased progressively. Sigmoidoscopy and barium enema revealed no evidence of mechanical obstruction of the colon. On the third day after admission, a serial roentgenogram revealed the cecum to be markedly dilated. (Fig. 5) A cecostomy was performed under local anesthesia. The cecum at operation was similar to that of Case 4. Following operation, the patient continued to follow a septic course from the



Figure 5

pneumonia and expired two weeks later. At the time of death, the cecostomy tube had been removed, and the distention had disappeared. The cecum in Fig. 5 is 20.5 cms. in diameter.

RESULTS

As noted from the case reports and from Table I, the immediate clinical results after cecostomy were good. In each case, the cecum was decompressed at the operating table, although not completely. In no instance did the cecum perforate following the operative decompression. This has been reported by some observers to have occurred following cecostomy for decompression in cases having a distal bowel obstruction. There were two hospital deaths of the five cases studied, but these deaths were not directly attributable to either the paralytic ileus or the use of cecostomy.

DISCUSSION

There can be no doubt that perforation of the cecum can and does occur as the result of progressive and unrelieved paralytic ileus. When increasing intraluminal pressure develops in the small and large

Table I—Cecostomy for Paralytic Ileus

Case	Age	Clinical Cause of Ileus	No. of Days of Ileus	Pre-Op. Size of Cecum	Condition of Cecum at Operation	Post-Op. Result of Cecostomy	End Result Following Cecostomy
I	69	Trauma	9	16.5 cms.	Perforated	Good	Died of pulmonary embolus 3 weeks postoperatively
II	82	Trauma	4	17 cms.	Serosal tear	Good	Recovered
III	85	Cardiac failure dehydration	3	12 cms.	Areas of gangrene	Good	Recovered
IV	67	Unknown	4	21 cms.	Dusky color	Good	Recovered
V	60	Pneumonia	3	20.5 cms.	Dusky color	Good	Died of pneumonia 2 weeks postoperatively

bowel secondary to a paralytic ileus, the same physical law of pressure transmission applies as when a distal mechanical obstruction is present. In accordance with this law, the tensile strength of the wall of that organ having the widest diameter and the greatest surface area for a given length, will be exceeded first.[4] In the same manner as when a distal obstruction is present, the tension on the wall of the cecum increases not in proportion to its radius, but by the square root of its radius. Diastatic perforation, by definition, refers to a spontaneous rupture of a non-diseased hollow viscus which occurs from a prolonged unrelieved intrinsic lesion in the same viscus, at a varying distance from the undiseased bowel. It is generally accepted that diastatic perforation of the cecum occurs from a combination of five basic mechanisms: (1) ischaemia of the bowel wall; (2) the action of bacterial toxins; (3) a competent ileocecal valve with formation of a closed loop; (4) reduced plasma proteins; and of most importance, (5) the presence of an obstruction distal to the area of perforation.

Of the cases herein reported, there was no instance of distal mechanical obstruction. Perforation of the cecum occurred in one case, however; the taenia of the cecum was split in another; areas of gangrene in the cecal wall were found in a third case; and the walls of the cecum were dusky in color in the remaining two cases. It seems reasonable, therefore, to assume that paralytic ileus may be added as a causative factor to the current definition of diastatic perforation, and may also be considered to be a sixth mechanism in the production of this type of perforation.

It is a difficult problem to determine when operative decompression of the markedly distended cecum is necessary in a case with severe, progressive, paralytic ileus. Lowman[3], in his study of cases with distal obstructions of the colon, has proposed an empiric cut-off point of cecal distention at 9 cms. as the point at which perforation is impending. In this type of case, the decision as to when operation should be performed presents little difficulty, because in every case of large bowel obstruction a proximal decompression procedure is indicated as soon as the diagnosis is made.

Decompression of the cecum has no place in the treatment of paralytic ileus except in the selected type of case herein reported in an attempt to prevent perforation of the markedly over-distended cecum.

The width of cecal distention of the cases in Table I and as depicted on the reproduced roentgenograms in Figures 1-5 was measured in centimeters across the greatest transverse diameter of the cecum with the patient in the supine position at a focal length of 40 inches. The sizes of the distended cecums ranged between 12 cms. and 21 cms.

Although cecal measurements in this range are causes for concern, the chief factors to be considered in deciding for operative decompression of the cecum for paralytic ileus are as follows: (a) progressive enlargement of the cecum shown by daily roentgenograms; (b) failure of decompression of the distended cecum by intubation and drug therapy; and (c) a duration of distention over three days with the widest diameter of the cecum measuring 12 cms. or more.

It should be emphasized that the additional morbidity of cecostomy in the ill patient, when performed under local anesthesia, is negligible when compared to the disastrous results of spontaneous perforation of the cecum.

SUMMARY

The mortality rate of reported cases having a perforated cecum is in the range of 75 per cent despite all medical and surgical therapy. That the cecum can perforate from a paralytic ileus is borne out by the case reports presented. Five cases under-

went emergency cecostomy for impending perforation of the cecum secondary to a paralytic ileus. The results are tabulated in Table I. It is proposed that paralytic ileus be recognized as an additional mechanism in diastatic perforation of the cecum. The factors to be considered as indications for surgical decompression of the cecum in cases of paralytic ileus are discussed.

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Air Conditioning Is Healthy

Air conditioning—custom tailored climate—means much more than mere cooling. Properly used, air conditioning implies year-round modification of humidity, air currents, and dust content of air as well as combating cold or heat, said an article in the July issue of Today's Health, a publication of the American Medical Association.

According to the author, J. C. Furnas, Lebanon, N.J., air conditioning "rescues hay fever sufferers from airborne pollen and keeps heart patients at recommended even, moderate temperatures." It can "be distinctly 'good for' the healthiest . . . because it takes much of the curse off the bullying heat and smothering humidity of our temper-gnawing, energy-sapping summers."

In order to derive the full benefits from air conditioners, people must learn to keep windows and doors shut. The air conditioner is designed on the assumption that it alone will be processing your indoor climate. "It needs no amateur help."

Most people agree that air conditioning is helpful, but ideas of temperature comfort can also vary among individuals. "Humidity itself rules out any possibility of settling on an 'ideal temperature' for human beings."

A housewife who feels all right at 75 degrees with 50 per cent humidity will swelter if it goes to 80 per cent. Drop the humidity to 20 per cent and she will be chilled. This is a sound reason for keeping the doors and windows shut. "Letting in untreated outside air destroys the humidity-temperature balance on which comfort depends."

Considerable debate still exists over the proper setting of the thermostat. In warmer parts of the country air-conditioned families often go for the fixed-level theory, ignoring outdoor conditions. The author recommends, however, a 15 degree spread between the inside and outside temperature. "Thanks to the humidity angle, this 15 degree spread gets practically all the potential comfort out of home air conditioning."

With an efficient air conditioner keeping interior humidity at the proper 40-50 per cent level, even 80 degree temperature indoors to match 95 degrees outdoors will not be at all oppressive.

" ' It's not the heat; it's the humidity' may be trite, but it's the backbone of sound air conditioning."

National Medical Foundation for Eye Care

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WE BY NATURE tend to shy away from the discussion of subjects that are unpleasant. Up until two years ago this had been the philosophy of ophthalmology in socio-economic medicine. By that time it had become quite evident to even the most lethargic in our profession that the practice of medicine in our chosen specialty was under vital attack through propaganda and legislation by a non-medical group. Early in 1955, the Section on Ophthalmology of the American Medical Association appointed a committee to make a study of this subject in detail. The report of this committee was rendered at the Atlantic City meeting of the American Medical Association on June 8th of that year. On the basis of this report several important and basic resolutions were adopted and approved by the House of Delegates. These resolutions were the subject of my discussion in December, 1955, when it was my privilege to address your society at its annual meeting in Richmond.

Several important events have occurred since that date. The remainder of this talk will be an attempt to elucidate the most outstanding of them.

The scientific field of ophthalmology has always been covered at the national level in an outstanding manner by the Section of Ophthalmology of the American Medical Association, the Academy of Ophthalmology and Otolaryngology, the American Ophthalmological Society, and the Association for Research in Ophthalmology. These organizations by the very nature of their charters, and rightly so, deal exclusively with scientific matters. Modern medicine is an interdependent blend of science, psychology, sociology and economics. If we fail to meet the changing times in any one of these spheres, then our freedom to advance our science and render a greater service to the public to which we are dedicated is seriously jeopardized. In short, gentlemen, what would it profit us as a profession or the public interest in particular to spend 100 per cent of our time in improving our scientific knowledge and to neglect the socio-economic sphere while organized optometry through its state and federal legislative onslaughts strips us of the right to use such knowledge to the best interest of the public. Prior to the organization of the National Medical Foundation for Eye Care at the Academy meeting in Chicago in October, 1956, there was no organization in existence to deal with these vitally important socio-economic problems although the need for such had existed for a long time.

The American Optometric Association at its Seattle, Washington, meeting in June, 1954, finally became bold enough to publicly state its official policy and I quote, "It is the stated policy of the American Optometric Association in convention assembled that the field of visual care is the field of optometry and should be exclusively the field of optometry. Throughout the years the optometry laws of the several states have granted exemptions to certain groups and classes. Resolved that the individual state associations are recommended to make serious study of the optometry laws prevailing in their states to the end that exemptions be restricted, limited and ultimately eliminated."

Optometry had been pursuing a course in that direction for several years prior to making this announcement. The only surprising thing about this is that they were willing to admit their objectives, something they had heretofore made considerable effort to conceal. These resolutions fulfill a useful purpose insofar as the medical profession is concerned because they served to dispel any remaining doubt from the minds of some as to the intent of official optometry.

Although the National Medical Foundation for Eye Care officially had its genesis at the Academy meeting in Chicago in October, 1956, the idea for such an organization was born at the American Medical Association meeting in Atlantic City in June, 1955, when it became apparent that none of the existing ophthalmological societies was equipped to deal with this dangerous problem. In setting up the Foundation it seemed logical to utilize the enormous experience that the original American Medical Association committee has acquired on this subject. Therefore, the original Board of Trustees was comprised largely of the members of that committee and they are: Dr. Alson E. Braley, Iowa City, Iowa; Dr. Paul A. Chandler, Boston, Massachusetts; Dr. Frederick C. Cordes, San Francisco, California; Dr. J.

Presented before the Virginia Society of Ophthalmology and Otolaryngology, Roanoke, December 6, 1957.

Spencer Dryden, Washington, D. C.; Dr. Harold F. Falls, Ann Arbor, Michigan; Dr. Everett L. Goar, Houston, Texas; Dr. Erling W. Hansen, Minneapolis; Minnesota; Dr. Charles E. Jaeckle, East Orange, New Jersey; Dr. A. D. Ruedemann, Detroit, Michigan; Dr. Ralph O. Rychener, Memphis, Tennessee; Dr. Barnet R. Sakler, Cincinnati, Ohio; Dr. Edwin Forbes Tait, Norristown, Pennsylvania; and Dr. Derrick Vail, Chicago, Illinois.

Under the most capable chairmanship of Dr. Ralph O. Rychener, this board has had several meetings during the past year to conduct the enormous volume of business of the Foundation. These meetings usually last two days and the attendance has been excellent. When men of this calibre are willing to give so much of their time and talents and often travel great distances on behalf of the Foundation, it fully demonstrates that in their minds the future of ophthalmology is in jeopardy. The objectives of the Foundation have been published in its basic brochure from which it is clear that its primary objective is to inform the profession and the public on the essentials of good medical eye care.

The Foundation has also published a pamphlet titled "What Is An Ophthalmologist?" This contains a definition of an ophthalmologist, an optician, and an optometrist. It is evident that there existed a great need for this kind of information since a quarter of a million of these have already been requested and distributed. The third and most important publication thus far is the monograph titled, "Medicine, Optometry and Public Welfare." This constitutes primarily a report to the medical profession but is designed to provide basic information in documented form for use by anyone who is concerned with the special problems or issues involving optometric and ophthalmological relations. This first major report covers three topics: 1. A discussion of the reasons why the teaching of optometrists by medical men is unethical; 2. A review of recent public activities and pretensions of optometry; 3. A discussion of the subject of patient referrals by optometrists.

The Foundation has in preparation further major reports on such topics as: 1. The history and present status of optometric education; 2. A study of the institutional accrediting agencies, particularly in connection with schools of optometry; 3. A history of refraction and the evolution of optometry as a technical group; 4. A guide for physicians in their relations with optometrists; 5. A study of ancillary personnel in the ophthalmological field; 6. A summary of union plans for eye medical care.

In addition to these formal publications, the Foundation has issued several news letters to the profession to keep our members and prospective members informed of the Foundation's progress and of the special situations with which we have been dealing. One such special situation was the effort of organized optometrists in the South to persuade the Southern Regional Education Board that it should support proposals to provide more educational facilities for the training of optometrists in the South with subsidies from public funds. A request was made by the Regional Board to the American Medical Association for a recommendation on this important matter. This request was in turn referred to the Foundation and an exhaustive and factual study of this question and the existing situation was prepared and widely circulated through the South among medical and related groups.

This was directly instrumental in stimulating many medical and other agencies in the South to endorse the Foundation's views and to auger the futility of the proposals which were made by official optometry to the Southern Regional Education Board. It is indeed a pleasure to be able to report that the Regional Board, on September 21, 1957, unanimously voted to act in accordance with the Foundation's recommendations.

To give the Foundation a broader representation, to provide opportunity for greater numbers of its members to participate in its affairs and to give us eyes and ears in every part of our country, the Foundation has organized a group of some one hundred and fifty key men from every state in the Union. These key men are rendering a vital service to the Foundation, particularly in dealing with legislative matters.

A classical example of this occurred this past summer when those men rendered such valuable service in helping the Foundation develop its opposition to Section 5 of H.R. 6719 before the Veterans Affairs Committee of the United States House of Representatives. This legislative attempt by optometry is so typical of its tactics that it justifies some detailed discussion.

The so-called rider method of legislating has long been used by certain groups to pass bills that will not stand on their own merits. The technique is simple. Select a popular bill that is sure to be enacted and tack on a rider or section containing the desired proposal in the hope that it may ride through unnoticed or be steered through by a chosen com-

mitted legislator. Optometry has had considerable experience and on occasions been successful in this type of legislating.

Using this technique in 1950, optometry slipped a clause in the Social Security Act, Public Law 734, which made it binding on the states to accept the opinion of optometrists not only as to the existence of blindness and its cause but also whether or not it may be alleviated by medical or surgical treatment. As a result of this legislation many who could be rehabilitated by surgery are unwittingly being paid a blind pension. Once on the statute books, it is exceedingly difficult to remove. This is another of the objectives of the Foundation.

Now, getting back to H.R. 6719, this is a very popular and much needed piece of legislation. It is designed to increase the pay of physicians and dentists in the Veterans Administration. It is almost certain to pass. Optometry, through its lobbyists, has tacked on a rider known as Section 5, which simply states that the word "optometrist" would be included in each and every place where the words "physician" and "dentist" appeared. Hearings were held before the subcommittee of the Veterans Affairs Committee on June 12, 1957. The Veterans Administration, which has to administer this law, testified against Section 5 on the grounds that they had no difficulty in obtaining all the optometrists they needed at the present pay schedule. Dr. Jaeckle and I presented the Foundation's views in opposition to Section 5 on the obvious grounds that optometrists were not professional equals of physicians, could not render a comparable service and therefore not entitled to comparable standing. To force the Veterans Administration to accept this equal status would tend to drive physicians out of the Veterans Administration instead of attracting more into it, thus defeating the very purpose of the bill. We also pointed out that to increase the pay by 300 per cent for one group of technicians from among the many groups employed by the Veterans Administration, who often render a much more needed service, would create a very undesirable morale problem among the more important medical and dental technicans.

After hearing the testimony the subcommittee, made up of seven representatives, voted to remove Section 5. A few days later the full committee of twenty-five representatives met and broke precedent and reinstated Section 5 into the bill by overriding the recommendations of the subcommittee, who had heard all the testimony. In the closed session of the full committee one committed legislator was able to influence the votes of enough of those eighteen members who had heard no testimony to reinstate Section 5 in the bill. This points up the problem we have to face and gives our all important key men another chance to exercise their new-born strength since the bill will become active again with the opening of the Second Session of the 85th Congress on January 7, 1958.

Proposed changes in optometric laws are introduced in many states and the District of Columbia every year. These legislative sputniks may differ slightly in their wording but it is of interest to note that they all fall within the pattern of the resolution of the American Optometric Association as previously quoted. They usually begin by declaring optometry to be a learned profession and proceed to define optometry to include everything from reading a Snellen chart to orthoptics plus a few vague and indefinable terms such as "all preventive or corrective optometric methods and analyses of ocular functions." After this sphere of optometry has been defined to include every non-surgical procedure normally performed in an ophthalmologist's office, these legislative proposals will then exempt physicians; however, in some cases only certain classes of physicians, but in no case will it exempt the physician's ancillary personnel.

Under such a law the physician's nurse would be practicing optometry if she took a visual acuity or did a visual field and would be subject to prosecution by the Board of Optometry. Orthoptic technicians and those who assist physicians in contact lens work would likewise fall into this trap. This clearly illustrates what the American Optometric Association meant by "limiting the exemptions". Once this has been achieved then they can "ultimately eliminate the exemptions". This of course means that the physician will no longer be allowed to practice medical ophthalmology including refractions.

When one pauses to contemplate that the proponents of this kind of legislation are financed by an annual income exceeding one million dollars derived from a check off of one per cent at the wholesale level on the optical material they dispense, this picture becomes alarming. Is there any wonder why so many ophthalmologists across the entire country have come to recognize this menace to the future of their profession. When Dr. Rychener so clearly stated this situation before some 600 members at the Academy meeting in Chicago in October, 1956, better than ninety per cent of them became charter members of the National Medical Founda-

tion for Eye Care forthwith. This membership has grown to some 1700 members during the past year. Although this is a very impressive beginning, the Foundation must double its membership this year in order to fulfill its mission. This should not be difficult from a potential membership of some nine thousand. It can be done if every present member will spread the message to his colleagues because it has been demonstrated time and again that we only need to get a hearing for our case to gain a convert to our cause. This is equally true on the floors of our state legislatures and in Congress and since our objectives and the public welfare are the same we cannot fail in this cause.

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Executives and Nonexecutives and Vascular Disease

Being an executive doesn't necessarily mean that you have high blood pressure or hardening of the arteries. In fact, a recent five-year study of more than 2,000 individuals showed that executives had less hypertension and arteriosclerosis than did nonexecutive office workers of comparable sex, age, and work environment.

The study, reported in the June 19 Journal of the American Medical Association, was made by Dr. Richard E. Lee, New York Hospital-Cornell University Medical College, and Dr. Ralph E. Schneider, New York University College of Medicine.

The authors defined an executive as a person dealing with policy formation and implementation. The 1,171 male executives studied ranged from "top executives" (board directors, corporate officers, and general managers) to "minor executives" (division heads, auditors, and others of lesser rank than department heads).

Also studied were 1,203 nonexecutives, of whom 563 were women. They included stenographers, secretaries, clerks, assistant supervisors, and supervisors.

Of the executives, 12.3 per cent had some type of high blood pressure, as did 15 per cent of the male nonexecutives over 40 years of age. Arteriosclerosis of some type was found in 7.8 per cent of the executives and 15.4 per cent of the nonexecutives.

No significant relationship was found between the incidence of heart attacks and the level of business responsibility. Heart attacks occurred in 3.7 per cent of executives and 5.1 per cent of the nonexecutive males over 40.

Among the reasons suggested by the doctors for the less than expected rate of executive vascular disease is that these men have learned the value of "escape valves" and the need for outside avenues of expression, such as hobbies.

"The lack of an increased incidence of hypertension among executives as a 'stress' phenomenon further emphasizes the importance of reaction by the individual to his environment rather than the physical and intellectual demands of that environment per se."

"Stress is a relative and a subjective matter. When the inherent capacities of the individual to perform fail to measure up to the demands of his world, the harmonious balance between the subject and his environment is disrupted and a stress reaction takes place."

This occurs, "regardless of whether the factor in the external environment is a speedily approaching deadline for a frantic technical assistant or the threatened failure of a large business venture for the director in charge."

In conclusion, the authors wondered if "at least a part of the recent emphasis on dangers of executive life to the vascular system may be based more on knowledge of the exceptions rather than of the rule."

Myelocytic Leukemia

Tem Therapy of 335 Cases

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THE LEUKEMIAS are among the most responsive of all neoplastic diseases.[1] The 335 cases of myelocytic leukemia on triethylene melamine therapy tabulated in this review of the medical literature for the years, 1949-56, do not cover the subject, for 11 of the 60 references do not give the number of patients treated. The number of recorded remissions also exceeds the 196 indicated in Table I, for 16 of the clinical reports fail to state the number of remissions observed. When the data are calculated on the number of articles which give both the number of patients treated and the remissions noted the rate is 66% on TEM therapy. This is a little lower than that recorded in 471 cases of lymphocytic leukemia.[1]

Chronic myeloid leukemia was much more responsive than acute myeloid leukemia to TEM management, although the latter had more remissions than acute lymphocytic leukemia. Not all clinical reports differentiated between the acute and chronic forms.

Table II gives a more detailed account with brief notations on the degree of remissions observed on TEM therapy.

The original literature has been made available by the National Library of Medicine, and the libraries of Furman University and the Greenville General Hospital.

TABLE I

TEM THERAPY OF MYELOCYTIC LEUKEMIA

No. of Refs.	No. of Cases	Chronic Cases	Acute Cases	Remissions	No. of Refs. Not Giving Rem.	Remission Rate
60	335	290	44	196	11	66%

TABLE II

MANAGEMENT OF MYELOID LEUKEMIA WITH TEM

Cases	Acute	Chronic	Remissions	Comments on Therapy	References
62	....	62	40	Good clinical and hematologic remissions	Heilmeyer, 1954
29	3	26	25	17 Good, 6 fair hematologic remissions in chronic. 2 fair in acute	Bond, 1953
17	....	17	7	Good remissions to 8 months	Bond, 1952
13	....	13	9	7 of 8 given TEM, orally had remissions to 10 months, 2 of 5 given TEM intravenously had remissions to 3 months	Karnofsky, 1951
10	....	10	....	Good but brief remissions	Ohta, 1954
18	9	9	6	Good remissions of 2 weeks to 8 months in chronic. Some remissions in 9 acute for 22 days	Meyer, 1952
9	....	9	6	Clinical and hematologic remissions of 2 weeks to 14 months	Ritz, 1952
9	9	....	....	Brief remission in 7 of 12 myeloblastic and lymphoblastic leukemias	Beyers, 1952
8	2	6	8	2 Complete clinical and hematologic remissions and 4 partial to 2 years in chronic. 2 acute had some remission	Marmont, 1954 (2)
8	....	8	6	Good remissions	Kravitz, 1952 (1)
8	....	8	6	4 Excellent, 2 fair responses	Kravitz, 1952 (2)
8	....	8	6	3 Remissions of 6 weeks to 6 months, 1 of 6 months to 1 year, 2 remissions of over 1 year	Gillhespy, 1954
8	....	8	5	1 Good, 4 fair hematologic remissions	Gigante, 1954
7	....	7	5	2 Remissions for 20 days, 3 for 30 days, but 1 had severe bone marrow depression	Yanguas, 1955
7	....	7	4	Improvement	Schwartz, 1952
7	....	7	2	Fair remissions	Paterson, 1953
7	....	7	....	Some remissions but not as good as in lymphocytic	Haelner, 1954
7	7	....	1	Slight remission	Rundles, 1952
6	....	6	6	Remarkable improvements	Milic, 1954

1. Sampey, J. R., J. So. Car. Med. Assoc. 53, 202 (1957); ibid. 54: 53 (1958); Am. J. Surg., In Press.

TABLE II—Continued

Cases	Acute	Chronic	Remissions	Comments on Therapy	References
6	....	6	5	1 Notable improvement, 3 good hematologic, 1 fair	Lenti, 1954
6	....	6	4	Some remissions in 4 cases	Rottino, 1952
5	....	5	5	Good remissions for 2 months	Garciga, 1953
5	....	5	....	Good response	Marmonte, 1954
5	....	5	4	1 Excellent, 3 good remissions	Arrau, 1955
4	....	4	3	Some improvement	Hall, 1952
4	....	4	3	Brief hematologic remissions	Rhoads, 1950
4	4	....	....	Poor response in acute myelomonocytic leukemia	Silverberg, 1952
4	1	3	....	Response in myeloid not as good as in lymphoid	Winkler, 1954
4	2	2	2	Not as good remissions in chronic myeloid as in lymphoid, and no response in acute myeloid leukemia	Asua, 1955
3	....	3	3	Satisfactory remissions	Cavit Sokmen, 1954
3	....	3	3	Fair remissions not as good as nitrogen mustard	Colarusso, 1952
3	2	1	3	Subacute had complete remission, chronic had partial	Dubois-Ferriere, 52
3	....	3	....	Little improvement	Hansen, 1952
3	....	3	3	Good remissions	Lenti, 1953
3	2	1	....	Little improvement	Storti, 1954
3	1	2	2	1 Complete, 1 partial remission in chronic, and no response in acute	Wright, 1955
2	....	2	2	Fair remissions	Bock, 1953
2	....	....	....	Appearance of mitosis in blood in therapy	Brugsch, 1954
2	2	....	2	Fair remissions in subacute cases	Dubois-Ferriere, 1953
2	....	2	1	Fair response	Haga, 1953
2	....	2	2	Brief clinical and hematologic remissions	Linke, 1953
2	....	2	2	Good remissions, better than with urethan or x-ray	Neumann, 1952
1	....	1	1	Partial remission	Klima, 1953
1	....	1	....	Early resistance developed	Lattanzi, 1949
1	....	1	....	Fatal bone marrow depression developed	Slipyan, 1953
1	....	1	1	Hematologic remission for 1 month	Stich, 1955
1	....	1	1	Fair remission	Wright, 1952
1	....	1	1	Fair remission	Wright, 1950
1	....	1	1	Some improvement	Koyama, 1953
....	....	....	....	Fair remission in 52 cases Hodgkin's disease and chronic leukemias	Alpert, 1952
....	....	....	....	TEM considered a dangerous drug	Ceresa, 1954
....	....	....	....	Better remission with lymphatic leukemia	Introzzi, 1953
....	....	....	....	34 Hodgkin's disease and leukemias. Some clinical response in myeloid leukemia	Karnofsky, 1953
....	....	....	....	Some remission in 10 of 16 chronic leukemias	Meyer, 1951
....	....	....	....	Some response in both chronic and acute cases	Pavlovsky, 1953
....	....	....	....	Best results with chronic myeloid leukemia out of 75 cases of lymphomas and leukemias	Romeo Orbegozo, 1953
....	....	....	....	Good remission in chronic leukemias	Rosenfeld, 1955
....	....	....	....	Little effect on chronic or acute	Shimkin, 1955
....	....	....	....	Chronic responded but acute was contraindicated	Wintrobe, 1954
....	....	....	....	Brief, partial remissions in chronic	Rosenthal, 1952

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The National Foundation

The National Foundation for Infantile Paralysis has dropped the reference to a specific disease in its title and will be known in the future as The National Foundation.

Projected plans center on the development of an organized voluntary force in the fields of medical research, patient aid, and professional education, flexible enough to meet new health problems as they arise.

The first new goals will be research and eventually a patient aid program in arthritis and congenital malformations. Virus research will be continued and expanded as will the investigations currently being conducted into the disorders of the central nervous system.

No attempt will be made to duplicate the work of other voluntary agencies, Basil O'Connor, President of the organization said, although as scientific breakthroughs occur they will be pursued wherever they lead, with the general objective the improvement of man's health.

All five areas of the expanded program will be financed through the traditional March of Dimes conducted annually in January.

The new program was adopted after five years of exhaustive investigation of areas of need in the health field and careful assessment of the strengths of the National Foundation that could be applied to other problems. Conferences were held with medical, civic and governmental leaders, as well as with representatives of National Foundation Chapters from all regions of the country. The Board of Trustees approved the program on May 28, 1958.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Safety Services in the Event of a Radiation Incident

(Knowledge every physician should have)

Although the age of the atom is in its infancy, man already is realizing the tremendous benefits from the peace-time applications of this vital new force. Nuclear energy has made possible rapid advancements in medicine, agriculture, industry, and basic research, and its uses are being expanded and improved constantly. Atomic energy has been compared with electricity or fire and this comparison is useful in a discussion of safety. Both electricity and fire are useful servants but they can be lethal unless proper precautions are taken. The same is true for nuclear energy and man must learn to use this additional power with safety. As a natural outgrowth of increased participation in programs calling for the use of atomic energy by both public and private organizations, more nuclear materials are being handled by more people throughout the country. Attention has been given to training these people in the proper handling of the materials with which they are dealing.

The United States Atomic Energy Commission takes great pride in its safety record and the Commission expects to keep its fine record intact. Because the nuclear energy field is broadening and because the Commission is charged with assuring protection for the public against radiation, the agency has launched a program to acquaint state and local officials with the radiological services it is prepared to offer in the event of a significant nuclear incident.

Such an incident may result from losing or misplacing an isotope or other radioactive material, from the capsule coming apart and spreading the radioactive material, from accidents in transportation causing the radioactive material to be spread on the highway, to be carried to water, to pollute the air, or to contaminate food. Another incident might be the loss of a nuclear weapon from an aircraft, resulting in its fall to an area with or without explosion. Such an incident occurred in South Carolina. Reactors may cause incidents as the result of fire or "run away"; in the latter case pollution of the air may follow. England had a reactor incident that spread contamination over an area of 150 miles.

The manager of the Oak Ridge Operations, S. R. Sapirie, says: "Because of the many safeguards which have been established by the State and Federal governments, we believe that the probability of a serious incident involving radioactive materials or radiation is remote. However, we recognize our responsibility to ameliorate any possible hazard to the health and safety of the public."

Virginia has 104 licensees for the use of radioactive materials. Hospitals are largely in the majority of those using these materials. There is one reactor for study and research in medical and other sciences in the State, at the University of Virginia. There is one manufacturing firm in Lynchburg licensed to handle radioactive materials. In every instance the Atomic Energy Commission distributes radioisotopes only to personnel who are thoroughly trained in the use and handling of such materials and can thereby exercise control and ensure that proper safety methods are observed.

In the event of a nuclear incident there would be need for specialized personnel who are equipped to monitor radioactive materials, to inform local officials and physicians if any hazard exists, and to suggest steps necessary to protect the public. The Atomic Energy Commission has for some time had in readiness such experts who can at a moment's notice go to any locality needing them. The Commission can send such help only on request and the request should be made through proper local or State officials. The State Department of Health is one such State group through which assistance may be requested. The teams, which would be furnished immediately on completion of such request, would include scientists, engineers, and physicians, as appropriate. These experts would be drawn from the staffs of the Commission and its major contractors.

The Atomic Energy Commission has divided the country into several areas. Virginia is in an eight-state area embracing Arkansas, Kentucky, Louisiana, Mississippi, Missouri, Tennessee, Virginia and West Virginia. The services of the Oak Ridge Operations, with headquarters in east Tennessee, have been made available for this area.

It is probable that in the event of a radiation

incident any private physician might be called on for his services or advice. It is, therefore, highly important that all physicians be prepared to render assistance and to know where to request special assistance. In case of a radiation incident the following should be done:

1. Keep people away
2. Put out fire
3. Take care of the injured
4. If a liquid has been released, try to dam it and prevent it flowing; particularly, keep it out of streams
5. See that the Atomic Energy Commission is called if it is apparent that such help is needed
6. Call them through official agencies of the State; the State Department of Health is one such agency. Telephone Richmond, MIlton 4-4111, extension 2863, the Commissioner; 2865, Health Education; 2874, Local Health Services; or 2377, Sanitary Engineering.

It should be remembered that the team from the Atomic Energy Commission can come only to render assistance, to help, and that, in themselves, they have no legal authority or police powers. If such authority is needed to control the situation, it must be supplied locally through sources that have been granted such powers.

Monthly Report of Bureau of Communicable Disease Control

	July 1958	July 1957	Jan.-July 1958	Jan.-July 1957
Brucellosis	2	5	13	17
Diphtheria	0	4	13	12
Hepatitis	24	18	163	286
Measles	1289	283	20701	4609
Meningococcal Infec.	9	8	56	47
Meningitis (Other)	13	101	115	200
Poliomyelitis	16	10	26	26
Rabies (In Animals)	11	32	200	209
Rocky Mt. Spotted Fever	8	6	18	22
Streptococcal Infec.	281	308	4680	4550
Tularemia	4	0	25	19
Typhoid Fever	2	6	17	26

Heart Sounds Over Telephone

A new device that accurately and easily transmits heart sounds and electrocardiograph readings over the telephone is described in the July 26 Journal of the American Medical Association.

The new apparatus "seems to solve most of the problems" which have interfered with telephone consultations between heart specialists, according to Dr. E. Grey Dimond, Kansas City, Kan.

Practical usefulness of telephone consultation previously has been limited by the bulkiness of the equipment, by the necessity of some electrical connection between the patient, the electrocardiograph, and the telephone, and by the need for special permission from the telphone company for connection and transmission. The new device, developed at the cardiovascular laboratory of the University of Kansas Medical Center, overcomes these problems.

The five-pound transistorized unit is attached directly to the patient by standard lead wires and placed adjacent to the mouthpiece of the telephone. The electrocardiograph signal is picked up by the phone and no wire connections is needed. At the receiving end, a similar unit takes the information from the telephone and carries the signal to any standard electrocardiograph machine. In addition, with a standard heart-sound microphone heart tones and murmurs can be transmitted by the apparatus.

Mental Health . . . .

BEVERLEY ROSENBAUM

Rehabilitation of the Mentally Handicapped

Rehabilitation of the mentally and emotionally disabled is essentially a new trend in general social action and public health. Two recent developments were responsible for this increased interest: the influence of the war, and the enactment of the Barden-La Follette amendment to the Federal Vocational Rehabilitation Act in 1943. Prior to this amendment, the Federal program did not make provisions for mental and emotional disorders as a separate disability. Clients were accepted on the basis of a physical disability only. Therefore, the only way possible to receive services for a mental or emotional handicap was if it were secondary to a physical disablement.[6]

DEFINITION OF TERMS

The term "mentally handicapped" as referred to in this paper shall mean those persons who are either mentally retarded or mentally deficient.

It is necessary here that we differentiate between the terms mental retardation and mental deficiency, for these are not synonymous terms. Doll defines mental deficiency as: "(1) social incompetence, (2) due to mental subnormality, (3) which has been developmentally arrested, (4) which obtains at maturity, (5) is of constitutional origin, and (6) is essentially incurable".[10] This intellectual defect is a reflection of an impairment of the central nervous system, which is essentially incurable. It will be a condition existing either from birth or shortly thereafter, and one which will always require assistance and supervision.

Mental retardation, on the other hand, refers to individuals who, for temporary or long-standing reasons, function intellectually below the average of their peer groups, but whose social adequacy is not in question; or, if it is in question, there is the likelihood that the individual can learn to function independently and adequately in the community.

Thus, we can distinguish between the two terms by saying that the mentally retarded individual only requires *temporary* specialized assistance, whereas the mental defective will always require it. This distinction is important in terms of job placement, as we shall later see.

ELIGIBILITY

The determination of eligibility particularly requires the services of qualified and skillful psychological and medical examiners who must provide the agency with objective evidence by which to show that without our efforts the individual would be unable to adjust to an adequate job situation. It is also part of the examiners' function to determine why the individual does not or probably will not adjust—why he can not get an adequate job or hold one after he gets it.

Some kinds of evidence that show that the individual needs our assistance is shown in the following examples:

1. The individual cannot get an adequate job. He does not know how and where to apply and may not know how to reach places of employment. Perhaps he is timid and fearful and unable to express himself clearly. He will not make a good impression on a prospective employer. He may need help in filling out the application forms and be afraid to ask for assistance in completing them. Once he has had such an experience, he may avoid the ordeal entirely and cease trying to find a job.

2. Assume that the individual has obtained a job. He has difficulties in learning what is expected of him because he may not understand oral or written directions. He may have difficulty in comprehending the special trade vocabulary, or in remembering directions and the sequence of directions. He has not acquired basic social skills and attitudes that are necessary for success on a job, such as habits of promptness, neatness, courtesy, and respect for his employer and his fellow employees. As a result of his short-comings, the individual has also become discouraged, feels inadequate, and is less successful than he otherwise could be. He is discharged, or he quits, perhaps after only brief acquaintance with the situation which to him appears exceedingly trying and complex.

3. The individual has genuine difficulties in learning the job operations. For this reason, he may

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Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

need to have more time spent with him in actual demonstration of processes. Perhaps the job requires some small academic function of which he is not capable, or perhaps the individual has some manipulative handicap.

As a result of these and other conditions which constitute a mental handicap (which may be determined with the client's personal history and interview, and supplemented by tests and inventories), the individual may find it too hard to obtain an adequate job or to hold a new job in a strange situation without special preparation, guidance, and supervision.[2]

FEASIBILITY

Frequently clients are eligible for vocational rehabilitation services, but not feasible. The Vocational Rehabilitation Manual states: "It should be recognized that an individual may meet the criteria of eligibility, but because of circumstances inherent in the individual or available services, it is not possible to prepare the individual for employment. . . . After eligibility and practicability have been established, all rehabilitation services needed by the individual should be provided."

Therefore, for an individual to be eligible and feasible on the basis of a mental handicap for vocational rehabilitation, it must be demonstrated in competent psychological and medical examinations and evaluations that: (1) an inadequacy of intellectual functioning has been instrumental in producing a retardation of mental growth which is manifest in failure to perform above the level of a child in important aspects of education and life; (2) this inadequacy of intellectual functioning is neither so severe nor so inclusive as to eliminate the mental and personality resources necessary for successful vocational rehabilitation or to prevent their mobilization (classification).[2]

THE COUNSELOR'S ROLE

In the development of a vocational plan for the mentally handicapped, all of the counselor's skills come into play. He must have a sympathetic understanding of these individuals, because they are quick to sense a superficial interest or an irritation arising from their apparent lack of comprehension. He must have a thorough knowledge of his client's attitudes toward seeking employment, and a thorough knowledge of employers' attitudes regarding the employment of these individuals. Most people need some stimulation and encouragement in looking for work; this is particularly true of the mentally handicapped. Some of them have met failure so often that they have little self-confidence. Most of them feel pretty insecure in being able to get a job when they want one so very much. The counselor must always be aware of this need for encouragement when working with the mentally handicapped.

Vocational and educational counselors are equipped by training and experience to help their clients to an understanding of and decision about their own work capacities in relation to realistic and satisfying job goals. Counseling takes into consideration not only the client's real or potential work abilities and interests, but also the specific requirements, mental, physical, and emotional, of types of employment. Counseling also considers the availability and trends of availability of various types of employment in a given labor market. Thus, a client may be helped to redirect his efforts in a field closely related to his chosen one if it is suitable for him and if his chosen one offers neglible or very limited employment possibilities in the area where he wants to work.

Vocational counseling is helpful to people who are confused about their own job goals because they lack knowledge either of the rich variety of vocations available to people who need information about the preparation needed to enter or advance in a particular field and for those whose present kind of work is dissatisfying or medically contra-indicated. It is also frequently indicated for people in businesses of their own if they have had little or no previous experience with business methods and practice.[12]

SELECTIVE PLACEMENT

In counseling an applicant about a job, the things which may seem relatively simple and obvious to the average individual will need careful explanation with the mentally handicapped.

If the counselor knows his client well, and knows his strengths and weaknesses, he will be in a better position to find suitable employment for him. For example, if his client is an extreme mental defective, and the counselor is having difficulty placing him, perhaps he can find work for him in a sheltered workshop situation, where he will not have to work in competition with those around him. And too, if the counselor himself is convinced that his client can do a particular job, he may be able to convince a reluctant employer to hire him—if not permanently, at least on a trial basis.

If a client is placed on a seemingly satisfactory job from the viewpoint of skills and job information

and fails to make the grade, then personal adjustment training may be required. At the present time, however, a few localities have set up personal adjustment training facilities which can serve adequately the mentally handicapped.

EMPLOYMENT

As in the vocational rehabilitation of the physically handicapped, employment in a remunerative occupation is the main goal in the vocational rehabilitation of the mentally handicapped, too.

The question might arise as to how we as counselors can sell the mentally handicapped person to the employer. First and foremost, the employer must be informed of the assets and skills of the mentally handicapped individual, and also of his limitations. It is necessary to use a positive approach with the employer by describing the demands of the job and the clients' ability to meet those demands. However, it is also necessary to inform the employer about the limitations of the client to forestall the imposition of new and complex demands and to warn the employer against promoting the client into kinds of work for which he is not suited. In all cases, it is necessary to emphasize to the employer that the mentally handicapped have the capacities to do the job.

In a study made on 55 women in Minneapolis, 35 were found to be gainfully employed in addition to 13 who were housewives, 5 who were not located, and 2 who were known to be unemployed. Earnings of the girls ranged from one who worked for board and room only to one who earned sixty-eight cents an hour. In conjunction with this, a study was made of 92 mentally handicapped males. The following is a list of the varied jobs they held:

Tannery—sorting hides	Bill-peddling
Railroad yardman	Pin-setter
Carpenter-laborer	Paper boy
Warehouse—unpacking boxes	Farm hand
Factory—piece work	U.S. Army
Machine shop	Factory—finisher
Bell-hop	Bakery—bread molder

It is interesting to note that in this study a great many of these individuals found their own jobs.[7]

If the client is not ready for employment in a competitive situation, then the counselor should look for "semi-sheltered" jobs. By this term is meant a type of job in situations where fast production is not required and where a congenial atmosphere is more usually present, i.e., as an employee in a hospital, school or philanthropic agency. The community service agencies may sometimes desire to employ mentally handicapped individuals to fill low level jobs where turnover is great with persons of normal intelligence. The rural community and county agricultural agents may sometimes provide valuable assistance in placing the client, but as a general rule, it is undesirable to transplant the client from an urban to the rural community or vice versa.

We have thus seen the potentialities of the mentally handicapped, and also some examples of successful job placement. Through adequate counseling and guidance, and selective placement, these individuals can be returned to gainful employment. The mentally handicapped are a distinct source of untapped manpower in this country; by helping them, we are helping ourselves.

SUMMARY

The term mentally handicapped was used in this paper to refer to mentally deficient and mentally retarded individuals. They are considered eligible for rehabilitation services on the basis that their handicap is a deterrent to employment. The counselor plays an important role in the rehabilitation plan of the mentally handicapped. Frequently he must assume a protective parent role in addition to his usual duties and he must use all of his skills in counseling and placing these individuals. It has been said with considerable truth that there are more jobs for the mentally handicapped in this world than there are mentally handicapped persons to fill them. There are many types of manual labor, both rural and routine monotonous industrial jobs, so commonly found in modern assembly lines, which are filled with more contentment by persons of less than average intelligence. It is not safe, however, to assume that the mentally handicapped are always without ambition and satisfied to work within their capability; an important role of the psychologist and vocational counselor in dealing with the mentally handicapped is to assist him to be satisfied with his maximum level of performance and to prevent the development of anxiety in striving for the impossible.

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Meat for Premature Infants

Anemia and iron deficiencies in premature infants can be partially overcome with the early addition of meat to their diet. This dietary supplement, given within two to four weeks after birth, has particular value in increasing red cell volume and circulating hemoglobin mass and building iron reserves. These conclusions are advanced after a study of 35 premature infants and are published in the June edition of the Journal of Diseases of Children, a publication of the American Medical Association. The authors, Dr. Thomas R. C. Sisson and Lorraine E. Whalen, Rochester, N. Y., said "there is an almost inevitable development of anemia and iron deficiency in premature infants during the first year of life."

Since meat protein is well absorbed and utilized by infants, the present study was undertaken to determine if the early addition of meat to the diet would be an effective source of iron. During the year-long test, customary diets for premature infants were given to all 35 babies. Fifteen were also given meat supplements beginning between the second and fourth weeks of life. A marked contrast in the two groups was apparent within a few weeks. Those receiving meat showed an increase of red cell volume and hemoglobin mass between the sixth and eighth week. This gain was not noted in the control group until about the twelfth week.

After this initial gain, in the control group there began a decline in blood values which in some instances reached such a low level it was necessary to give medicinal iron treatment. "The steady decline of these values . . . demonstrates the need for some effective iron source in the diet."

Following their early gain, the blood values of the meat-fed infants remained at a constant level until the thirtieth week when they again showed an increase. This increase continued during the remainder of the study and a definite "increase in iron stores" was noted by the time of their first birthdays.

"Strained meats were well tolerated by all infants, and frequent gastric distress associated with the administration of medicinal iron was avoided."

Meat "provides an excellent source of protein for the infant diet and, this study indicates, an acceptable and utilizable source of iron in natural form."

Pre-Paid Medical Care . . . .

Edited by
RICHARD J. ACKART, M.D.

It Can Be Done.

As long ago as May of 1949, Dr. Paul R. Hawley, currently the Director of the American College of Surgeons, wrote an open-letter to the members of the Michigan State Medical Society emphasizing that "the time is past, if indeed it ever existed, when the responsibility of the physician is limited to providing medical care". The physician, wrote Dr. Hawley, "must now offer a solution for the economic problems of medical care; he alone can do this without revolutionizing the pattern of medical practice. . . ."

Back in 1949 a few other countries, as well as the United States, were still enjoying and benefiting by the free-enterprise pattern to which Dr. Hawley referred. Through its sponsorship of Blue Cross-Blue Shield and its cooperation with other voluntary efforts, the medical profession here in the United States succeeded during the ensuing nine years in maintaining the free-enterprise pattern. But during that period, the free-enterprise system of providing health care disappeared—or was altered almost beyond recognition—in each of those other countries. Today free-enterprise in medicine is making its last-ditch stand here in the United States—every place else government is very much in the picture.

Today, even more than in 1949, the medical profession must hold itself accountable for the economic as well as the professional aspects of medical care—because today as many as 121 million persons are eligible for prepaid health services, which services can be used only at the discretion of doctors. Upon how wisely those services are used depends the continued success of voluntary prepayment; upon the continued success of prepayment, in turn, depends the continuance of the free-enterprise pattern of medical practice. Back in May of 1949 only 60 million persons were eligible for prepaid services; therefore, as concerns the nation's annual medical care bill, the significance of utilization of prepaid services has to date increased two-fold. Therefore, too, toward continuance of the free-enterprise pattern, the responsibilities of the medical profession also have doubled since the day Dr. Hawley wrote his admonitory letter. The growth of prepayment has indeed added to the medical profession's responsibilities—to itself as well as to the public—at the same time that it has protected the medical profession's time-honored way of life.

Many doctors can see "the big picture" and are unselfishly, oftentimes altruistically, accepting their own personal responsibilities in this regard. But, though many in actual number, these doctors apparently are in the minority percentage-wise because the task is not being accomplished. Utilization of prepaid services is not being held to judicious levels. Inadvertent misuse (sometimes fraudulent abuse) of prepaid services is jeopardizing the continued success of prepayment—is jeopardizing continuance of the free-enterprise pattern of medical practice. It's high time for those doctors who are looking beyond their own immediate and selfish interests not only to accept their personal responsibilities but also to accept a certain amount of responsibility for and in behalf of their seemingly myopic colleagues.

In the past the profession has successfully handled many tough problems through organized activity. This utilization problem requires similar activity—through active, local, on-the-spot organizations. Utilization Committees of the professional staffs of each and every hospital!

It can be done.

Not too long ago about six weeks advance notice was the minimum time required for a patient needing care to enter the Sacred Heart Hospital of Allentown, Pennsylvania. Once an emergency patient had to be turned away. Today a three-day reservation is all that is necessary, and emergency cases are taken at all times. An average of forty more patients are admitted each month. *And no new beds have been added.*

All this improvement came about through the members of the medical staff themselves. Stimulated by a few of their more prescient colleagues, the members of the staff surveyed the situation at their hospital—took a good look at it for the first time—and found that far too many patients were staying beyond the time they needed hospital facilities. Some appeared, they said, to be "Blue Cross boarders", unnecessarily utilizing the days allowed by their

contracts. Far too many patients were unnecessarily occupying hospital beds for diagnostic work-ups, studies which were medically indicated in most instances but which nonetheless were quite amenable to satisfactory accomplishment in out-patient or office facilities. In too many cases discharges were being postponed because the doctor's order for ancillary services had been delayed or because consultations had been delayed.

A Committee on Admissions, Conduct and Discharges was formed to work out and execute disciplinary procedures. The Committee was directed to formulate and put into action rules and regulations to correct abuses, with approval of the Medical Executive Board. The entire medical staff was, of course, advised about the function and action of the Committee.

Emergency cases were divided into Critical patients, Serious patients, and Urgent patients, according to diagnosis, and received their respective priority. Admission clerks received a list of conditions that came under each category. Physicians were advised to detail diagnosis so that definite determination as to emergency character could be made.

Each morning for two months the Committee reviewed admissions made during the previous 24 hours. If the attending physician's classification seemed too high, or if the admission appeared unnecessary, patients and charts were briefly examined. The Committee requested offending physicians to appear for explanation on 12 hours' notice. Failure to comply was considered an admission of guilt. Infractions were listed and several staff members were called to account, but only a few violated the spirit of total cooperation.

To shorten the patient stay, the following regulations were made:

1. Transfer of patient from one doctor to a specialist must be made before admission.
2. X-ray and laboratory tests must be ordered before noon on the day of admission to allow for orderly scheduling.
3. Consultation requests should be answered immediately.
4. Doctors should authorize discharge on the day before the patient is to leave so that he can be checked out by 11 A.M.
5. Patients may transfer only to private rooms; not from private rooms to semi-private or ward, since the shortage is in the latter facilities.

A concentrated effort was made to discharge patients who no longer needed hospital care. When patients and relatives complained, the attending physician explained that the Committee had ordered the action. This preserved the doctor-patient relationship and good will toward the hospital. In difficult situations, committee members themselves were asked to explain the new policy.

Within two weeks, ten long-term patients who needed little or no nursing care vacated their urgently needed beds. The community's health agencies were helpful in making services available to patients who no longer needed hospital care. In all cases the discharge proved advantageous to the patient.

Within two months the anti-abuse system was running so smoothly that the daily admissions review by committee members was no longer necessary. The doctors now are "patient-day conscious" and have formed the habit of complying with the new regulations. Hospital beds, for necessary in-patient care, are always available. The average patient stay has decreased by one-half day. A common sense approach to a difficult problem has paid off at Sacred Heart, and the doctors like it.

What can be done in Allentown can be done in each community here in Virginia. Today the profession must have standards of performance in the area of the economics of medical care, just as in the area of the quality of medical care, so why not Utilization Committees as well as Tissue Committees? No more than are Tissue Committees would Utilization Committees need to be "punitive"; but through surveillance of utilization practices (admissions, lengths of stay, use of drugs and diagnostic facilities) these committees could accomplish a great deal through "education"—through reminders that from now on the continuance of the free-enterprise pattern of medical practice is perhaps totally dependent upon proper usage of prepaid services.

Miscellaneous . . . .

Principles of Medical Ethics

This is the seventh of the series of "Principles of Medical Ethics", the first appearing in the Febrary issue. Each section will be reviewed, accompanied by a detailed explanation from the Judicial Council of the American Medical Association.

SECTION 8

A physician should seek consultation upon request; in doubtful or difficult cases; or whenever it appears that the quality of medical service may be enhanced thereby.

TRADITIONAL CONCEPTS INCLUDED WITHIN SECTION 8

The Judicial Council is of the opinion that Section 8 of the Principles of Medical Ethics, 1957, embraces the spirit and intent of several sections of the 1955 edition of the Principles, including Chapter IV, Section 3 (One Physician in Charge); Chapter V, Section 1 (Consultations Should be Encouraged); Chapter V, Section 2 (Consultation for Patient's Benefit); Chapter V, Section 3 (Punctuality); Chapter V, Section 4 (Patient Referred to Consultant); Chapter V, Section 5 (Discussions in Consultation); Chapter V, Section 6 (Responsibility of Attending Physician); Chapter V, Section 7 (Conflict of Opinion); Chapter V, Section 8 (Consultant and Attendant). These sections are reproduced below as guides in the interpretation of Section 8.

Chapter IV, Section 3 (One physician in charge) 1955 edition of the Principles of Medical Ethics:

> When a physician or a member of his dependent family is seriously ill, he or his family should select one physician to take charge of the case. The family may ask the physician in charge to call in other physicians to act as consultants.

Chapter V, Section 1 (Consultations should be encouraged) 1955 edition of the Principles of Medical Ethics:

> In a case of serious illness, especially in doubtful or difficult conditions, the physician should request consultations.

Chapter V, Section 2 (Consultation for patient's benefit) 1955 edition of the Principles of Medical Ethics:

> In every consultation, the benefit to the patient is of first importance. All physicians interested in the case should be candid with the patient, a member of his family or a responsible friend.

Chapter V, Section 3 (Punctuality) 1955 edition of the Principles of Medical Ethics:

> All physicians concerned in consultations should be punctual. When, however, one or more of the consultants are unavoidably delayed, the one who arrives first should wait for the others for a reasonable time, after which the consultant should be considered postponed. When the consultant has come from a distance, or when for any other reason it will be difficult to meet the physician in charge at another time, or if the case is urgent, or it be the desire of the patient, his family or his responsible friends, the consultant may examine the patient and mail his written opinion, or see that it is delivered under seal to the physician in charge. Under these conditions, the consultant's conduct must be especially tactful; he must remember that he is framing an opinion without the aid of the physician who has observed the course of the disease.

Chapter V, Section 4 (Patient referred to consultant) 1955 edition of the Principles of Medical Ethics:

> When a patient is sent to a consultant and the physician in charge of the case cannot accompany the patient, the physician in charge should provide the consultant with a history of the case, together with the physician's opinion and outline of the treatment, or so much of this as may be of service to the consultant. As soon as possible after the consultant has seen the patient he should address the physician in charge and advise him of the results of the consultant's investigation. The opinions of both the physician in charge and the consultant are confidential and must be so regarded by each.

Chapter V, Section 5 (Discussions in consultation) 1955 edition of the Principles of Medical Ethics:

> After the physicians called in consultation have completed their investigations, they and the physician in charge should meet by themselves to discuss the course to be followed. Statements should not be made nor should discussion take place in the presence of the patient, his family or his

friends, unless all physicians concerned are present or unless all of them have consented to another arrangement.

Chapter V, Section 6 (Responsibility of attending physician) 1955 edition of the Principles of Medical Ethics:

The physician in charge of the case is responsible for treatment of the patient. Consequently, he may prescribe for the patient at any time and is privileged to vary the treatment outlined and agreed on at a consultation whenever, in his opinion, such a change is warranted. However, after such a change, it is best to call another consultation; then the physician in charge should state his reasons for departing from the course decided at the previous conference. When an emergency occurs during the absence of the physician in charge a consultant may assume authority until the arrival of the physician in charge, but his authority should not extend further without the consent of the physician in charge.

Chapter V, Section 7 (Conflict of Opinion) 1955 edition of the Principles of Medical Ethics:

Should the physician in charge and a consultant be unable to agree in their view of a case, another consultant should be called or the differing consultant should withdraw. However, since the patient employed the consultant to obtain his opinion, he should be permitted to state it to the patient, his relative or his responsible friend, in the presence of the physician in charge.

Chapter V, Section 8 (Consultant and attendant) 1955 edition of the Principles of Medical Ethics:

When a physician has acted as consultant in an illness, he should not become the physician in charge in the course of that illness, except with the consent of the physician who was in charge at the time of the consultation.

Healthful Foreign Travel

Strange foods, meals off schedule, and excitement can add up to a terrific stomach-ache, if a person doesn't know how to keep fit abroad, according to a Today's Health article.

Before traveling abroad, a person should take a few precautions to protect his health, but he shouldn't let unnecessary fears ruin his trip.

Some suggestions for keeping fit were outlined by Ray Vicker, a Chicago writer, in the August Today's Health, an American Medical Association publication.

Before leaving, a person must have a smallpox vaccination, since a vaccination no older than three years is necessary for re-entry into the United States. Moreover, many countries require a vaccination for entry.

A few Latin American countries also require a personal health certificate issued by a physician. Even if a certificate is not necessary, it might be advisable to have a physical examination prior to departure. The doctor can recommend any special precautions for health protection and can advise on the preparation of a first aid kit.

If a person is going to a country outside Europe, he should have yellow fever and cholera immunizations and perhaps a tetanus shot.

Vicker noted that drinking water is safe in most of the big cities of Europe and many of the small. However, when in doubt, a person should drink bottled water. Ice cubes should be skipped unless they are known to be made from pure water. If water cannot be boiled it can be treated with a chemical in tablet form.

Stomach upsets, common to travelers, are often caused by contaminated food or water, eating indiscretions, or eating habits upset by time changes. Vicker suggested that a person take with him kaomagna, kaopectate and bismuth-paregoric preparations for such difficulties.

Unless milk is boiled, it should be avoided in many countries. The exceptions are Australia, New Zealand, Great Britain, Holland, Belgium, Switzerland, and the Scandinavian countries. In India, Malaya, and certain other countries, hot milk is served on cereal. This is a sign that the milk has been boiled.

Ice cream, butter, and fresh cheese are also taboo if the milk in a country is unsafe. And in the tropics, the taboo should be extended to include cold pastries, custards and meringues.

In preparing a first aid kit, a traveler should include sunburn lotion, aspirin, lotion for insect bites, and adhesives bandages, in addition to remedies for stomach upsets, seasickness, and malaria.

If a person wears glasses, he should take an extra pair or a prescription for his lens.

PRELIMINARY PROGRAM

111th MEETING

The Medical Society of Virginia

JEFFERSON HOTEL
RICHMOND, VIRGINIA
OCTOBER 12-14

PRELIMINARY PROGRAM

111TH MEETING

THE MEDICAL SOCIETY OF VIRGINIA

JEFFERSON HOTEL

RICHMOND, VIRGINIA

OCTOBER 12-14, 1958

Sunday, October 12

1:00 P.M.

COUNCIL

New Headquarters Building

7:00 P.M.
House of Delegates—Dinner Meeting
Ballroom

Monday Morning, October 13

9:30 A.M.

Ballroom

Welcome and Preliminary Announcements—Guy W. Horsley, M.D., Chairman, Local Committee on Arrangements

Memorial Observance—Acors W. Thompson, M.D., Chairman, Membership Committee

Address by President—Harry C. Bates, Jr., M.D., Arlington

10:25 A.M.—Intermission

Scientific Program

J. R. B. HUTCHISON, M.D., Arlington, Presiding

10:30 A.M.—VERTIGO OF CENTRAL ORIGIN—Francis H. McGovern, M.D., Danville

This discussion is concerned with the differentiation of vertiginous lesions of central and peripheral origin and the importance of recent advances in otology in localizing and classifying diseases along the vestibular pathway. This improved knowledge is of practical significance in the recognition of central nervous system diseases in which vertigo is a prominent symptom.

10:45 A.M.—TREATABLE STROKES—Thomas L. Gorsuch, M.D., Waynesboro

Anticoagulation offers effective treatment for thrombotic occlusion of the carotid and vertebral-basilar arteries. Cases illustrating the diagnostic features and methods of therapy of these "treatable strokes" will be presented.

11:00 A.M.—ANTI-COAGULANTS—Reno R. Porter, M.D., Richmond

A discussion of the general objectives of and indications for anticoagulant therapy, including comments on specific anticoagulant drugs and recommendations regarding their most effective use.

11:15 A.M.—*Guest Speaker*—Edward S. Orgain, M.D., Duke Hospital, Durham—THE PRESENT STATUS OF DRUGS IN HYPERTENSION (Sponsored by the Virginia Heart Association)

11:45 A.M.—Intermission

11:50 A.M.—A STUDY OF 200 CASES OF HEMOPTYSIS—Marcellus A. Johnson, III, M.D., Roanoke

A review of 200 consecutive patients seen with a primary complaint of hemoptysis. Slides will be shown depicting the final diagnosis in each case as established by bronchoscopy, bronchography, sputum studies, etc.

12:05 P.M.—POPLITEAL ANEURYSMS—Levi Old, Jr., M.D., Norfolk

Popliteal arterial aneurysms are usually false aneurysms due to atherosclerosis of trauma. The diagnosis is made by physical examination. The treatment is surgical in order to prevent the complications of thrombosis, rupture, distal embolization, nerve pressure or partial occlusion of the popliteal vein. Operative techniques include endoaneurysmorrhaphy, simple excision or excision with preservation of continuity by venous, homologous arterial, or plastic graft.

12:20 P.M.—VASCULAR ANOMALIES PRODUCING COMPRESSION OF THE TRACHEA AND ESOPHAGUS IN INFANCY AND CHILDHOOD—Lewis H. Bosher, Jr., M.D., Richmond

The diagnosis and surgical treatment of congenital vascular lesions which compress the trachea and esophagus will be illustrated by a presentation of five successfully treated cases. The importance of recognizing the symptom complex and making an early diagnosis is stressed.

Monday Afternoon, October 13

See special section on luncheons, committee meetings and special events.

2:00 P.M.
Reference Committee
Ballroom

Tuesday Morning, October 14
9:30 A.M.

Ballroom

HOLCOMBE H. HURT, M.D., Lynchburg, Presiding

9:30 A.M.—THE SULFONAMIDES—TWENTY-FIVE YEARS LATER—William H. Harris, Jr., M.D., Richmond

The first successful clinical application of a sulfonamide compound was reported in 1933. This paper discusses the clinical aspects of the sulfonamides currently available for systemic use including certain newer drugs.

9:45 A.M.—NEWER LIVER FUNCTION TESTS—Benjamin B. Weisiger, III, M.D., Richmond

The recent appearance of a number of enzymatic tests of liver function has opened a new field for study. The methods for and the clinical uses of these tests will be discussed.

10:00 A.M.—POST-CHOLECYSTECTOMY SYMPTOMS—C. B. Morton, M.D., Charlottesville

Patients suffering persistence or recurrence of symptoms after cholecystectomy may be divided into two groups. Those in the first group have symptoms never referable to the biliary tract in the first place. Those in the second group have symptoms because the operation did not deal adequately or properly with the original biliary tract disease or dyscrasia or because the operation introduced some new factor or factors responsible for biliary tract symptomatology.

10:15 A.M.—*Guest Speaker*—John J. Canary, M.D., Georgetown University Hospital, Washington, D. C.—ORAL HYPOGLYCEMIC DRUGS

10:45 A.M.—Intermission

10:50 A.M.—PRIMARY OVARIAN MALIGNANCY—Joseph C. Parker, M.D., Richmond

A study of the incidence, types, management, and results of treatment of primary ovarian malignancies at the Medical College of Virginia Hospitals. A review of the current literature, with suggestions for the early diagnosis and management of this condition, are presented.

11:05 A.M.—GENITAL CYTOLOGY—Clifford H. Fox, M.D., Charlottesville

An attempt will be made to survey the various aspects of genital cytology as they apply to the practicing physician. Fundamentals such as selection of patients, techniques of preparation, types of reports and their significance will be discussed. Illustrations and photomicrographs will be used.

11:20 A.M.—THE PHYSICIAN'S RESPONSIBILITY IN CHILDHOOD ACCIDENT PREVENTION—Forrest P. White, M.D., Norfolk

Accidents at home and on the highway are the number 1 killer of children today. Opportunities and responsibilities of physicians and medical societies are outlined in regard to this, the greatest unmet challenge in preventive medicine.

11:35 A.M.—*Guest Speaker*—Victor C. Vaughan, III, M.D., Eugene Talmadge Memorial Hospital, Augusta, Georgia — GENETIC COUNSELING——(Sponsored by the Nemours Foundation through the Virginia Council on Health and Medical Care)

Tuesday Afternoon, October 14
2:00 P.M.

Ballroom

C. C. HATFIELD M D., Saltville, Presiding

2:00 P.M.—NUTMEG POISONING — Robert C. Green, Jr., M.D., Winchester

Nutmeg is seldom considered to have toxic properties. However, in moderate doses (5 grams or more) it will produce a bizzare clinical syndrome with marked electrolyte changes. The chemistry and pharmacology of nutmeg will be reviewed and a case of severe nutmeg poisoning presented.

2:15 P.M.—MANAGEMENT OF RECENT MIDFACIAL FRACTURES—G. S. Fitz-Hugh, M.D., and J. B. Gorman, M.D., Charlottesville

Some useful suggestions in regard to diagnosis and treatment of the common fracture displacement of the nasal, maxillary and malar bones are presented. Accompanying soft tissue and introcranial injuries are not included. Emphasis is placed upon the prompt diagnosis of underlying bony injuries often concealed by soft tissue hemorrhage and swelling. The simpler type of reduction and immobilization of the fracture to reduce discomfort and morbidity are advocated.

2:30 P.M.—*Guest Speaker*—Ewald W. Busse, M.D., Duke University School of Medicine, Durham—NEUROTIC PROBLEMS IN THE AGED

3:00 P.M.—ANTIMALARIALS IN THE TREATMENT OF RHEUMATOID ARTHRITIS—John B. Catlett, M.D., Richmond

The use of antimalarials in treating rheumatoid

arthritis is discussed; the literature is reviewed; and five successfully treated cases are reported.

3:15 P.M.—Skin Grafting in Severe Burns—B. W. Haynes, Jr., M.D., Richmond

On the Burn Unit of the Medical College of Virginia Hospital, approximately 150 patients are treated yearly, a significant number of which require skin grafting. On the basis of this experience, a technique has been evolved which emphasizes early preparation of the wound for grafting, adequate nutrition, absolute hemostasis, graft immobilization and active physiotherapy to promote early functional recovery.

4:00 P.M.

House of Delegates

Coffee Shop

6:00 P.M.

Cocktail Party—Rotunda Club

7:00 P.M.

Banquet—Ballroom

Presentation of Fifty Year Club Awards,
Scientific Exhibit Awards, and Golf Prizes
Installation of Walter P. Adams, M.D. as President

9:30 P.M.

Dancing—Ballroom

SPECIAL EVENTS

Sunday, October 12

Council Meeting, New Headqaurters Building—1:00 P.M.

Virginia Section, American College of Chest Physicians, Flemish Room, Hotel Jefferson—2:00 P.M.

Virginia Society of Anesthesiology, Parlor 9, Hotel Jefferson, Business Meeting—11:00 A.M.—Cocktails—1:00 P.M.—Luncheon—2:00 P.M.—Guest Speaker, Curtiss B. Hickcox, M.D., Secretary-Treasurer, American Board of Anesthesiology, Inc., Hartford, Connecticut

Open House, New Headquarters Building—Dover and Hathaway Roads—4:00 P.M.

House of Delegates, Dinner Meeting, Ballroom, Hotel Jefferson, 7:00 P.M.

Monday, October 13

Board of Directors, Virginia Academy of General Practice, Breakfast Meeting, Randolph Room, Hotel Jefferson—8:00 A.M.

Virginia Diabetes Association, Breakfast Meeting, Parlor 9, Hotel Jefferson—8:00 A.M.

Virginia Academy of General Practice, Luncheon, Rotunda Club, Hotel Jefferson—1:00 P.M.

Virginia Section, American College of Physicians, Luncheon Meeting, Flemish Room, Hotel Jefferson—1:00 P.M.

Virginia Neuropsychiatric Society, Luncheon Meeting, Coffee Shop, Hotel Jefferson—1:00 P.M.—*Guest Speaker*, Daniel H. Funkenstein, M.D., Boston, Massachusetts

Virginia Orthopaedic Society, Luncheon, Commonwealth Club—1:00 P.M.

Virginia Pediatric Society, Luncheon Meeting, Randolph Room, Hotel Jefferson—1:00 P.M.

Virginia Radiological Society, Luncheon Meeting, Colony Club, Hotel Jefferson—1:00 P.M.

Virginia Society of Ophthalmology and Otolaryngology, Luncheon Meeting, Parlor 9, Hotel Jefferson—1:00 P.M.

Virginia Surgical Society, Luncheon, Commonwealth Club—1:00 P.M.

Reference Committee, Ballroom, Hotel Jefferson—2:00 P.M.

Sub-Committee on Rural Health, Dining Room "A", Hotel Jefferson—3:30 P.M.

University of Virginia Alumni Association Cocktail Party, Flemish Room, Hotel Jefferson—6:00 P.M.

Medical College of Virginia Alumni Association, Cocktail Party and Banquet, Commonwealth Club—6:00 P.M.

University of Virginia Alumni Association, Banquet, Ballroom, Hotel Jefferson—7:00 P.M.

Tuesday, October 14

Virginia Obstetrical and Gynecological Society, Luncheon Meeting, Confederate Room, Hotel Jefferson—1:00 P.M.

House of Delegates, Coffee Shop, Hotel Jefferson—4:00 P.M.

The Medical Society of Virginia, Cocktail Party, Rotunda Club, Hotel Jefferson—6:00 P.M.

The Medical Society of Virginia, Banquet, Ballroom, Hotel Jefferson—7:00 P.M.

Dancing, Ballroom, Hotel Jefferson—9:30 P.M.

TECHNICAL EXHIBITS

Technical Exhibits will be in the Empire Room and on the Mezzanine. Make your plans to visit all exhibits as they are an important part of your meeting. The following is a list of the exhibits with a brief description:

Booth No. 1

J. B. Roerig and Company

New York, New York

J. B. Roerig and Company will feature TAO (pronounced Tay-o), a new antibiotic derivative designed for superior control of common infections due to gram-positive and some gram-negative organisms. Co-featured with TAO will be ATARAX, the new "Peace of Mind" drug. It's an all new chemical specially indicated for the "more normal" person, to bring relief from everyday tensions and anxieties. Literature and samples are available to physicians at the booth which you and your friends are cordially invited to attend.

Booth No. 2

VanPelt and Brown

Richmond, Virginia

VanPelt and Brown extend a cordial invitation to visit their exhibit where representatives will be happy to answer questions and supply clinical samples of their products.

Booth No. 3

Davies, Rose and Company

Boston, Massachusetts

A cordial invitation is extended to the members to visit our booth.

Although most physicians need no introduction to our outstanding cardiac therapies—Pil. Digitalis and Tablets Quinidine Sulfate (Natural)—our representative, Mrs. James B. Mattison, will be on hand to welcome you and will be pleased to have the opportunity to further discuss the dependability of our laboratory productions.

Booth No. 4

A. S. Aloe Company

Washington, D. C.

"One complete Source for the Doctor and Hospital"

Visit the A. S. Aloe booth and see the latest in equipment and supplies for the doctor's office and laboratory. Be sure to get a sample of the new Aloe Disposable Glove for examinations.

Booth No. 5

The National Drug Company

Philadelphia, Pennsylvania

The National Drug Company exhibit highlights PARENZYME AQUEOUS, PARENZYME-B (Buccal) and PARENZYME OINTMENT. The efficacy of the anti-inflammatory, anti-edema agents PARENZYME AQUEOUS and PARENZYME-B has been clinically substantiated for the treatment of traumatic wounds, ulceration, phlebitis, occular inflammation and for loosening of bronchial plugs in severe pulmonary disease. Our representatives anticipate discussing with you the latest advance in Enzyme therapy in the form of PARENZYME-B (Buccal) and PARENZYME OINTMENT.

Booth No. 6

Medco Products Company

Philadelphia, Pennsylvania

The manufacturers of the very popular MEDCOLATOR present the new three-way MEDCO-SONLATOR which combines the benefits of neuromuscular stimulation (as produced by the MEDCOLATOR) plus the advantages of ultrasonic therapy, all in one compact unit. Electrical muscle stimulation and ultrasound may be produced simultaneously (or separately) through a patented SINGLE three-way applicator (transducer). Better results in treating many conditions may be expected from this combined unit.

Booth No. 7

Burroughs Wellcome & Company

Tuckahoe, New York

The extensive research facilities of "B. W. & Co.", both here and in other countries, are directed to the development of improved therapeutic agents and techniques.

Through such research "B. W. & Co." has made notable advances related to leukemia, malaria, diabetes, and diseases of the autonomic nervous system; and to antibiotic, muscle-relaxant, antihistaminic, and antinauseant drugs.

An informed staff at our booth will welcome the opportunity to discuss our products and latest developments with you.

Booth No. 8

G. D. Searle & Company

Chicago, Illinois

You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle Products of Research.

Featured will be Dartal, the new tranquilizing agent which controls activities associated with anxiety states and other neuroses; Enovid, the new synthetic steroid for treatment of various menstrual disorders; Zanchol, a new biliary abstergent; Nilevar, the new anabolic agent, and Policton, a new safe, non-mercurial oral diuretic.

Also featured will be Vallestril, the new synthetic estrogen with extremely low incidence of side reactions; Pro-Banthine and Pro-Banthine with Dartal, the standards

in anti-cholinergic therapy; and Dramamine and Dramamine-D, for the prevention and treatment of motion sickness and other nauseas.

Booth No. 9

The Baker Laboratories

Cleveland, Ohio

You are invited to visit our booth where Baker's Modified Milk and Varamel, two successful products for infant feeding, are on display.

Baker representatives will be glad to discuss with you the special features of Baker Milk products which promote better tolerance, less colic, better gain and improved tissue turgor for bottle-fed infants.

Booth No. 10

U. S. Vitamin Corporation

New York, New York

Exhibit features LUFA (Lipotropic factors with Unsaturated Fatty Acids), the new promising approach to hyper-cholesterolemia, hyper-betalipoproteinemia and atherosclerosis. LUFA Capsules effectively help to reduce elevated cholesterol and other blood lipid levels; maintain normal function of the liver, site of metabolism of cholesterol, lipoprotiens and other lipids.

Booth No. 11

Physicians Products Company

Petersburg, Virginia

Physicians Products Company extends a cordial invitation to the members and guests of The Medical Society of Virginia to visit our booth. F. A. "Dick" Frayser, Jr., and W. C. "Bill" Comstock will be in attendance to show you the latest fall releases. Professional samples and literature will be available.

Booth No. 12

The Purdue Frederick Company

New York, New York

The Purdue Frederick Company will present:

ProBilagol—liquid cholecystokinetic for the therapy of biliary tract diseases. Contains d-glucitol and homatropine methylbromide.

Senokot—constipation corrective containing the concentrated total senna glycosides.

Senokap—Senokot plus the stool softener, dioctyl sodium sulfosuccinate.

Senokot with psyllium—adds the bulk effect of psyllium to Senokot.

Senobile—adds the activity of bile salts to Senokot.

Booth No. 13

Warner-Chilcott Laboratories

Morris Plains, New Jersey

A visit to the Warner-Chilcott booth will be well worth while, especially in the interests of your cardiavascular patients, and those with mental or emotional disturbance. The booth features two clinically tested and proven agents: PERITRATE—to aid you in the management of patients with angina pectoris; and PACATAL—a profound ataractic agent with a "normalizing" action.

Booth No. 14

Roche Laboratories

Nutley, New Jersey

ROMILAR *CF* is a new, complete cold formula. Each of the four active ingredients of ROMILAR *CF* contributes to the relief of one or more of the most frequently encountered symptoms of the common cold.

GANTRISIN 'ROCHE' is a single, soluble, wide-spectrum sulfonamide for potent, well-tolerated antibacterial therapy.

Booth No. 15

The Wm. S. Merrell Company

Cincinnati, Ohio

Quiactin for quieting—an improvement over present tranquilizers for tension-anxiety states; patients remain alert, feel better, and TACE, a "treatment of choice" for suppression of lactation will be featured.

You are invited to discuss these and other Merrell research products with our representatives.

Booth No. 16

Milex of New York

Long Island City, New York

The MILEX CANCER DETECTION PROGRAM will be featured at this booth. Also on display will be TRICHO-SAN, our effective therapy for trichomoniasis, moniliasis and non-specific vaginal infections; LESTENS, our new treatment for premenstrual tension and dysmenorrhea; CRESCENT, the most imitated diaphragm; as well as other recent gynecological developments.

Booth No. 17

The Stuart Company

Pasadena, California

Particular interest has been shown by physicians in our new product Softran, for treating mild to moderate anxiety states. The fact that there is no safer or more effective tranquilizer, and that it is in our "softab" form, makes it ideally suited for this time. Softran will be featured at the Stuart booth along with two other widely accepted "softab" products, Bucladin, for nausea, and Mulvidren, the pleasant tasting multivitamin product that melts so quickly in the mouth.

Booth No. 18

E. R. Squibb & Sons

New York, New York

Booth No. 19

Nordmark Pharmaceutical Laboratories

Irvington, New Jersey

Booth No. 20

Eaton Laboratories

Norwich, New York

Furadantin®, a specific for urinary tract infections, provides rapid bactericidal action against a wide range of gram-positive and gram-negative bacteria and organisms resistant to other agents. In six years of extensive use in the treatment of genitourinary tract infections, development of bacterial resistance remains negligible with Furadantin.

For the control of the problem pathogens of bacterial diarrheas and enteritis, Furoxone® (brand of furazolidone) Liquid. Perorally effective against a wide range of enteric bacteria including common pathogenic species and strains of Escherichia, Salmonella and Staphylococcus not adequately controlled by antibiotics and sulfonamides. For use by patients of all ages (may be mixed with infant formulae; passes through a standard nursing nipple).

Booth No. 21

The Coca-Cola Company

Atlanta, Georgia, and Richmond, Virginia

Ice-cold Coca-Cola served through the courtesy and cooperation of the Richmond Coca-Cola Bottling Company, Inc., Richmond, and The Coca-Cola Company.

Booth No. 22

Ayerst Laboratories

New York, New York

You are cordially invited to visit the Ayerst exhibit which will feature "Murel", a new spasmolytic offering a unique 3-way mechanism of action in one molecule—*anticholinergic,* to inhibit transfer of parasympathetic stimuli to effector cells of smooth muscle (atropine-like); *muscolotropic,* to act directly on smooth muscle (paraverine-like); *ganglionoplegic,* to exert a definite but transient ganglion block. Also featured will be "Premarin" Intravenous, a physiologic hemostat, and "Cothera" Syrup —a non-narcotic cough specific.

Booth No. 23

Schering Corporation

Bloomfield, New Jersey

The Schering exhibit will feature TRILAFON, extremely potent tranquilizer and antiemetic, capable of alleviating manifestations of emotional stress without apparent dulling of mental acuity.

Extraordinary potency in behavioral effects without corresponding increase in autonomic, hematologic or hepatic side effects provides a favorable therapeutic ratio and excellent versatility in clinical use.

Booth No. 24

Pet Milk Company

Saint Louis, Missouri

We will be pleased to have you stop and discuss the variety of time-saving material available to busy physicians. Our representatives will be on hand to discuss the merits of "Pet" Evaporated Milk for infant feeding and "Pet" INSTANT Nonfat Dry Milk for special diets.

Booth No. 25

Smith, Kline & French Laboratories

Philadelphia, Pennsylvania

SKF features (1) Vi-Sorbin®, a potent modern tonic containing B_{12}, B_6, iron, folic acid and the Absorption Enhancement Factor, D-Sorbitol; (2) Temaril® Tablets, the unique oral medication for relief of itching, regardless of cause; (3) Compazine®, the tranquilizer and antiemetic virtually free from drowsiness and depressing effect; and (4) Thorazine®, one of the fundamental drugs in medicine.

Booth No. 26

Richmond Surgical Supply Company

Richmond, Virginia

The Richmond Surgical Supply Company will have a most interesting and informative exhibit covering the latest and most modern equipment.

Booth No. 27

Lloyd Brothers

Cincinnati, Ohio

The Lloyd exhibit will feature Lycinate, the completely new comprehensive therapy for the treatment of vaginitis. Lycinate permits the exposure of the offending organisms, resulting in the explosion of the trichomonad as well as bactericidal action against the commonly encountered mixed infections.

Doxinate and Roncovite, both products of original Lloyd research, will be on display and competent representatives will be happy to meet all physicians interest in these three major fields of therapy.

Booth No. 28

Eli Lilly and Company

Indianapolis, Indiana

You are cordially invited to visit the Lilly exhibit. The Lilly sales people in attendance welcome your questions about Lilly products and recent therapeutic developments.

Booth No. 29

Maltbie Laboratories

Belleville, New Jersey

You are cordially invited to visit the Maltbie Laboratories exhibit featuring: Desenex® Night and Day treatment of athlete's foot; Bifran® with a plus for obesity; Cholan preparations with effective hydrocholeresis and superior spasmolysis; Caldesene® Medicated Powder for diaper rash, and Nesacaine®, the first local anesthetic most potent yet less toxic than procaine.

Booth No. 30

A. H. Robins Company

Richmond, Virginia

The cough "season" finds ROBITUSSIN and ROBITUSSIN A-C featured at the Robins exhibit. The antitussive component is glyceryl guaiacolate which increases respiratory tract fluid almost 200 per cent. ROBITUSSIN A-C includes an antihistamine and codeine. Also shown are Robins' antirheumatic preparations PABALATE and PABALATE-HC (with hydrocortisone), the skeletal muscle relaxant ROBAXIN, the new antihistamine DIMETANE, and ALLBEE WITH C (B-complex with ascorbic acid).

Booth No. 31

Abbott Laboratories

Chicago, Illinois

Abbott Lahoratories will welcome members of the medical profession at the Company's exhibit of leading specialties and new products. Representatives will be in attendance to answer any questions you may have. Abbott recently introduced a number of new products which representatives at the exhibit will describe and give information on the results of clinical reports.

Booth No. 32

Wm. P. Poythress & Company

Richmond, Virginia

The Poythress exhibit will feature Solfoserpine, the new distinctive reserpine-Solfoton formula combination; Mudrane, so timely in the present asthma season; and the other well-established Poythress specialties: Solfoton, Trocinate Panalgesic, T C S and Uro-Phosphate. We invite your visit and request for trial supplies of any of these Poythress specialties. Mr. R. C. Crump will he our staffing representative.

Booth No. 33

Geigy Pharmaceuticals

Yonkers, New York

The Geigy exhibit will feature BUTAZOLIDIN and BUTAZOLIDIN-ALKA, potent non-hormonal agent effective against arthritis and against inflammation such as superficial thrombophlebitis; PRELUDIN, non-amphetamine appetite suppressant virtually free of CNS stimulation; STEROSAN-HYDROCORTISONE Cream and Ointment, for comprehensive control of a wider range of dermatoses; MEDOMIN, which provides "natural" sleep; SINTROM, the reliable oral anticoagulant especially suited for long term therapy; and DULCOLAX suppositories and tablets for the activation of normal colonic peristalsis in constipation.

Booth No. 34

Lederle Laboratories Division
American Cyanamid Company

New York, New York

Booth No. 35

Sandoz Chemical Works

Hanover, New Jersey

BepHan Space Tabs—new approach to prolonged maintenance of low gastric acidity.

BELLERGAL Space Tabs—assures around the clock control of functional complains (example—menopause symptoms) in the periphery where they originate.

FIORINAL a new approach to therapy of tension headache and other head pain due to sinusitis and myalgia.

Any of our representatives in attendance will gladly answer questions about these and other Sandoz products.

Booth No. 36

Doho Chemical Corporation

New York, New York

AURALGAN, ear medication in otitis media and removal of cerumen. OTOSMOSAN, effective non-toxic fungicidal and bactericidal (gram negative-gram positive) in the suppurative and aural dermatomycotic ears. RHINALGAN, nasal decongestant free from systemic or circulatory effect and equally safe to use on infants as well as the aged. NEW LARYLGAN, soothing throat spray and gargle for infectious and non-infectious sore throat involvements. TURGASEPT, ionic deodorizer aerosol spray, neutralizes odor immediately without floral masking or suhstituting a new odor.

Mallon Chemical Corporation, subsidiary of the Doho Chemical Corporation, is also featuring: RECTALGAN, liquid topical anesthesia for relief of pain and discomfiture in hemorrhoids, pruritus and perineal suturing. DERMOPLAST, aerosol freon propellant spray for fast relief of surface pain, itching, burns and abrasions. Also obstetrical and gynecological use.

Booth No. 37

Ciba Pharmaceutical Products

Summit, New Jersey

The Ciba exhibit will feature Tessalon a new agent to control cough. This preparation differs from other cough preparations in that it acts locally and it also suppresses the transmission of the cough reflex from the cough reflex center in the medulla. It is also in a very handy oval form as Perles which are designed for immediate release and rapid transmission to the blood stream.

Booth No. 38

Westwood Pharmaceuticals

Bufflalo, New York

FOSTEX CREAM and FOSTEX CAKE are new, easy to use, therapeutically effective medications in the treat-

ment of acne, dandruff and seborrheic dermatitis. They contain Sebulytic T (lauryl Sulfoacetate, alykl aryl polyether sulfonate and dioctyl sulfosuccinate), a unique combination of penetrating anionic soapless cleansers and wetting agents which are highly antiseborrheic and exert antibacterial and keratolytic effects—enhanced by sulfur, salicylic acid and hexachlorophene.

FOSTEX CREAM is applied as a therapeutic skin wash in the initial treatment of acne, when maximum degreasing and peeling are desired. Fostex Cake is used as a therapeutic skin wash for maintenance therapy to keep the skin dry and substantially free of comedones. Fostex Cream is also used as a therapeutic shampoo in dandruff.

Booth No. 39

Desitin Chemical Company

Providence, Rhode Island

DESITIN OINTMENT—pioneer CLO ointment for treatment of burns, ulcers, diaper rash, abrasions, etc. DESITIN POWDER, saturated with CLO, dainty, relieves chafing, sunburn, diaper rash, etc. DESITIN HEMORRHOIDAL SUPPOSITORIES and RECTAL OINTMENT, relieve pain and itching, promote healing, give comfort in uncomplicated hemorrhoids, fissures. No anesthetics or styptics. DESITIN BABY LOTION, protective, antiseptic, emollient, contains no mineral oil, cleanses baby skin with tender care. DESITIN ACNE CREAM, a non-staining, flesh-tinted "Medicream" for the treatment of acne vulgaris, skin blemishes, effective in removal of skin oiliness. Antiseptic. DESITIN COSMETIC AND NURSERY SOAP, supermild, pleasantly scented, antiseptic and deodorant.

Booth No. 40

R. J. Reynolds Tobacco Company

Winston-Salem, North Carolina

Welcome to the R. J. Reynolds Tobacco Company Exhibit! You are cordially invited to receive a cigarette case (monogrammed with your initials) containing your choice of CAMEL, WINSTON Filter, Menthol Fresh SALEM, or CAVALIER King Size Cigarettes.

Booth No. 41

Pfizer Laboratories

Brooklyn, New York

Visit the Pfizer display which features Cosa-Tetracyn, Cosa-Terramycin and Cosa-Signemycin, Pfizer's glucosamine potentiated antibiotics. The Pfizer representative will be pleased to provide you with information on the Company's broad line of antibiotics and specialty products.

Booth No. 42

Parke, Davis and Company

Detroit, Michigan

Members of our medical service staff will be in attendance at our exhibit to discuss important Parke-Davis specialties which will be on display.

Booth No. 43

Ames Company

Elkhart, Indiana

Booth No. 44

Mead Johnson and Company

Evansville, Indiana

The Mead Johnson exhibit has been arranged to give you the optimum in quick service and product information. To make your visit productive, specially trained representatives will be on duty to tell you about their products.

Booth No. 45

W. B. Saunders Company

Philadelphia, Pennsylvania

New Saunders titles of special interest are: Roberts—Difficult Diagnosis; Flint—Emergencies; von Oettingen—Poisonings; and Hollender—Psychology of Medicine.

Our whole line of Clinical books will be at the Saunders booth.

Booth No. 46

Charles C. Haskell & Company

Richmond, Virginia

Featuring BELBARB, used for over 20 years in peptic ulcer, gastrointestinal hypermotility, simple anxiety reactions and tension states, etc., and the HASAMAL family of analgesics. Introducing BELBARMINE, a combination of the BELBARB formula with d-amphetamine for appetite suppression and simple anxiety tension states.

Booth No. 47

Ortho Pharmaceutical Corporation

Raritan, New Jersey

Ortho cordially invites you to their booth where DELFEN Vaginal Cream, Ortho's most spermicidal contraceptive, will be featured. Also on display will be RARICAL Iron-Calcium Tablets, an effective iron calcium compound for use in iron deficiency anemias and in all cases requiring calcium supplementation. RARICAL Iron-Calcium with Vitamin Tablets, a complete prenatal supplement, will also be displayed. Ortho representatives will be happy to meet you and answer any questions you may have on Ortho products.

Booth No. 48

Sanborn Company

Waltham, Massachusetts

Visitors at the Sanborn Company booth will have full opportunity to see and have demonstrated the outstanding new portable VISETTE (18-pound, transistorized ECG) together with the popular Model 51 Viso-Cardiette, as

well as latest models of other instruments for cardiavascular (and other) diagnostic use.

In addition, there will be demonstrations and/or data available on all Sanborn research recording systems—direct-writing, photographic and tape; on supplementary oscilloscopes; and on physiologic transducers.

Booth No. 49

Dome Chemicals

New York, New York

Dome proudly presents the ACNE-DOME Group for complete Acne Therapy; DOMERINE SHAMPOO for scalp seborrhea; the most comprehensive series of topical corticosteroids—CORT-DOME, NEO-CORT-DOME, COR-TAR-QUIN, CORT-QUIN, HIS-A-CORT-E, ES-A-CORT, ACNE-CORT-DOME, many in both Creme and Lotion form, ACID MANTLE Creme and Lotion for housewives' eczema; a complete line of Wet Dressings including DOMEBORO and SOY-BORO Powder Packets, and the new SOYALOID COLLOID BATH containing the unique Colloidal Soy Bean Complex.

Booth No. 50

Ross Laboratories

Columbus, Ohio

As adjunct to the physician's oral reassurance of anxious new parents, the ROSS DEVELOPMENTAL SERIES offers visual materials (INDIVIDUAL CASE RECORDS, BEHAVIORAL DEVELOPMENT FOLDERS, EMOTIONAL DEVELOPMENT BOOKLETS). Current concepts stress the development of the infant as a whole being. Physiologic infant feeding may be discussed with your SIMILAC representative.

Booth No. 51

Zimmer-Baxter Associates

Charlotte, North Carolina

Booth No. 52

Peoples Drug Stores

Washington, D. C.

Peoples Drug Stores are deeply grateful to the physicians of Virginia for their continued cooperation and support. The members of The Medical Society of Virginia, in attendance at the annual meeting in Richmond, are cordially invited to visit our booth. Representatives of our Company will be on hand to greet you and furnish information concerning the professional services offered to physicians.

Woman's Auxiliary . . . .

*President*_____ Mrs. John R. St. George, Portsmouth
*President-elect*_____ Mrs. Charles A. Easley, Danville
*First Vice-President*_ Mrs. Girard V. Thompson, Danville
Second Vice-President
Mrs. George K. Brooks, Jr., Richmond
*Third Vice-President*_ Mrs. Robert H. Detwiler, Arlington
*Recording Secretary*____ Mrs. James R. Grinels, Richmond
Corresponding Secretary Mrs. Howard I. Kruger, Norfolk
*Treasurer*_____ Mrs. Wyndham B. Blanton, Jr., Richmond
*Parliamentarian*____ Mrs. Richard M. Reynolds, Norfolk
*Historian*_____ Mrs. Hawes Campbell, Richmond

PROGRAM

of the

Thirty-sixth Annual Convention

Richmond, Virginia October 12-15, 1958

Headquarters—Hotel Jefferson

A cordial invitation is extended to all members of the Woman's Auxiliary to The Medical Society of Virginia, their guests and the wives of physicians attending the convention to participate in all social functions and attend the general meeting of the Auxiliary.

Information and tickets for luncheon and tour of homes will be available at the registration desk. Luncheon reservations will close at 10:00 a.m. on Tuesday.

Registration Hours

Sunday, October 12 _____ 5:00 p.m. to 7:00 p.m.
Monday, October 13_____ 9:00 a.m. to 4:00 p.m.
Tuesday, October 14_____ 9:00 a.m. to 10:30 a.m.
Please register promptly upon arrival and receive badge.

Monday, October 13

9:30 A.M.—Continental Breakfast, Colony Club, Hotel Jefferson
All registered guests invited.

10:00 A.M.—Pre-Convention Board Meeting, Colony Club
All State Officers, Directors and Committee Chairmen, County Presidents and Presidents-elect are expected to attend.
Mrs. J. R. St. George, President, presiding.

2:00 P.M.—Tour of homes
Admission—$3.00. Proceeds to be contributed to the Sheltering Arms Hospital. Sponsored by the Woman's Auxiliary to the Richmond Academy of Medicine. Transportation furnished for registered guests.

2:00 to 5:00 P.M.—Tea at the home of Dr. and Mrs. Donald S. Daniel, 203 Ampthill Road, Richmond.
All registered guests invited. Transportation furnished only to those attending tour.

Tuesday, October 14

9:00 A.M.—Formal Opening of the Thirty-sixth Annual Convention of the Woman's Auxiliary to The Medical Society of Virginia, Flemish Room—Hotel Jefferson
Mrs. J. R. St. George, President, presiding.
All women attending the convention cordially invited.
Invocation—Mrs. Hawes Campbell, Convention Chaplain
Pledge of Loyalty:
I pledge my loyalty to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation, and ever sustain its high ideals.
Address of Welcome—Mrs. William F. Grigg, Jr., President, Woman's Auxiliary to the Richmond Academy of Medicine.
Response—Mrs. Lemuel E. Mayo, Immediate Past-President, Woman's Auxiliary to the Portsmouth Academy of Medicine.
Convention Announcements—Mrs. George K. Brooks, Jr., Chairman of Arrangements.
Roll Call of Auxiliaries—Mrs. James R. Grinels, Recording Secretary.
Minutes of the Thirty-fifth Annual Meeting—Mrs. Grinels.
Introduction of Honored Guests—Mrs. E. Arthur Underwood, of Vancouver, Washington, President of the Woman's Auxiliary to the American Medical Association; Mrs. Walker L. Curtis, of College Park, Georgia, President of the Woman's Auxiliary to the Southern Medical Association, and Mrs. Kalford W. Howard, of Portsmouth, Virginia, First Vice-President of the Woman's Auxiliary to the Southern Medical Association.
Presentation of the President of The Medical Society of Virginia, Dr. Harry C. Bates, Jr.—Mr. Robert I. Howard, Executive Secretary.
Greetings—Dr. Harry C. Bates, Jr.
In Memoriam—Mrs. Lee S. Liggan
Remarks by the President and Recognition of State Officers and Committee Chairmen—Mrs. John R. St. George.
Report of Credentials Committee — Mrs. R. Bruce Lawrence
Report of the Treasurer—Mrs. Wyndham B. Blanton, Jr.
Courtesy Resolutions—Mrs. Maynard R. Emlaw
Unfinished Business
New Business
Recommendations from the Board
Report of the Nominating Committee — Mrs. A. B. Gravatt
Election of Officers
Presentation of Representatives from the Crippled Children's Hospital—By Mrs. Rufus Brittain, Chairman Philanthropic Fund.
Report of Delegates to Annual Convention of the Woman's Auxiliary to the American Medical Asso-

ciation, Held in San Francisco, California, June 23-27, 1958—Mrs. William F. Grigg, Jr., Chairman

Guest Speakers:

Mrs. E. Arthur Underwood, President, Woman's Auxiliary to the American Medical Association.

Mrs. Walker L. Curtis, President, Woman's Auxiliary to the Southern Medical Association.

Adjournment.

12:30 P.M.—Inaugural Luncheon, Commonwealth Club

Mrs. John R. St. George, President, Presiding.

Invocation—Mrs. Hawes Campbell

Presentation of Honored Guests

Luncheon

Installation of Officers—Mrs. E. A. Underwood

Presentation of President's Pin and Gavel—Mrs. J. R. St. George

Presentation of Past-President's Pin — Mrs. Lee S. Liggan

Inaugural Remarks—Mrs. Charles A. Easley

Convention Acknowledgments—Mrs. George K. Brooks, Jr.

Fashions by Montaldo

Adjournment.

3:30 P.M.—Post-Convention Board Meeting — Mrs. Charles A. Easley, President, presiding. Colony Club

All new State Officers, Directors, Committee Chairmen, County Auxiliary Presidents and Presidents-elect are expected to attend.

Wednesday, October 15

8:30 A.M.—Past-Presidents Breakfast — Mrs. Lee S. Liggan, Chairman.

COMMITTEE ON ARRANGEMENTS

General Chairman—Mrs. George K. Brooks, Jr.

Co-Chairman—Mrs. William F. Grigg, Jr.

Credentials—Mrs. R. Bruce Lawrence

Finance and Registration—Mrs. Wyndham B. Blanton, Jr.

Hospitality—Mrs. Carl S. Lingamfelter

Luncheon—Mrs. Gilman R. Tyler

Coffee Hour, Meeting Places and Pages—Mrs. Raymond C. Hooker, Jr.

Exhibits—Mrs. Martin Markowitz

Publicity—Mrs. James K. Hall

Corresponding Secretary, Printing and Supplies—Mrs. L. Benjamin Sheppard

Flowers—Mrs. Frederick E. Vultee

Fairfax.

At the monthly luncheon of this Auxiliary on April 1st, the following officers were installed: President, Mrs. Thomas Haggerty; president-elect, Mrs. Carl Parker; corresponding secretary, Mrs. John Prominski; recording secretary, Mrs. Joseph Provenzano; and treasurer, Mrs. Gerard Inguagiato.

On April 15th, the Auxiliary was hostess to the Arlington and Alexandria auxiliaries at a luncheon. Mrs. St. George and Mrs. Easley, president and president-elect of the State Auxiliary, were guests of honor.

Northampton-Accomac.

This Auxiliary held its summer meeting on July 15th at the cottage of Mrs. W. T. Green, Jr., at Tankard's Beach. There were twenty-four members present. Officers for 1959 were elected as follows: President, Mrs. Milton Kellam; vice-president and president-elect, Mrs. W. C. Henderson; secretary, Mrs. R. W. Wingfield; and treasurer, Mrs. Wayne Mears.

Mrs. Isadore S. Zfass,

A member of the Auxiliary to the Richmond Academy of Medicine, was recently elected first vice-president of the newly organized Woman's Auxiliary to the American Electroencephalographic Society.

Editorial....

The History of the 45th General Hospital

IT IS DIFFICULT to write about the usual medical matters when so many excellent books are being published by or about medical men in Virginia. "From Lee to Bari," a history of the 45th General Hospital during World War II, is the most recent example of an outstanding volume which should not be permitted to pass without mention.

This 500 page account of the manifold activities of this general hospital was prepared by Dr. Alton D. Brashear of Richmond, who was Chief of the Dental Service for virtually the entire period of the unit's activity. In the preface the author stated he was prompted to write this book as a companion volume to the history of "Base Hospital No. 45 in the Great War", as a tribute to the sponsoring Medical College of Virginia and as a memorial to those members who died in service. Worthy as these objects were, there was no need to justify the preparation of this most readable and thoroughly documented account of the activities of 200 Virginians who served in the medical, dental and administrative corps, as well as several hundred nurses and well over a thousand enlisted men from every state in the Union.

While it appears next to impossible to pass the knowledge gained in one war to those whose lot it is to fight the next, if such can be done the lessons learned and recorded by the 45th General Hospital should be of inestimable value. If only the total number of admissions and deaths are recalled, a level of accomplishment was achieved which may, at some future time, be equalled but hardly surpassed. At Rabat and subsequently at Naples and Bari, a total of 35,844 patients were admitted. Sixty-five died or less than one for every 500 admissions. Under the existing circumstances a death rate of 0.18 per cent approaches perfection.

The record made by this group in history's greatest war should have been recorded and could not have been prepared in a more adequate fashion. It is hoped that some former member of the 8th Evacuation Hospital will perform a similar service for the excellent unit raised at the University of Virginia by the late Staige D. Blackford before this valuable information becomes dissipated by the vagaries of memory.

H.J.W.

Current Currents

MEDICARE funds of $70.2 million have been approved by the Congress, which has let it be known that it does not expect the military services to exceed that figure. The Department of Defense has, therefore, outlined certain restrictions which will be imposed on the program beginning October 1. They are:

1. Dependents living with sponsors will use military facilities, unless such facilities are unavailable and dependents' cards so certified.

2. New and first trimester maternity patients, living with sponsors, must, after October 1, use military facilities unless special authorization is granted for civilian care. Second and third trimester patients, under civilian care October 1, may continue. However, if change of physician is made, patient must use military facility unless special authorization is secured.

3. All services "not clearly specified in law" will be discontinued in civilian facilities for patients living with or apart from sponsors. These discontinued services include injuries not requiring hospitalization, termination visits prior to hospitalization, tests before and after hospitalization, well baby visits, elective surgery and nervous and mental diseases.

Eligible dependents not residing with sponsors retain freedom of choice. Civilian emergency care will continue. In those areas having more than one military facility, commanders will establish clearing points to assure optimum use of all service hospitals.

A FIELD SURVEY of 25 skilled nursing homes in various sections of the nation is being conducted by the AMA Council on Medical Service. The primary purpose of the survey is to obtain data that will aid in developing recommended guides and standards governing medical care in nursing homes. The Council is anxious to secure information on such phases of nursing home operation as nursing care, food service, social service, staffing, personnel policies and costs. Tentative plans call for a result of the survey, along with suggested standards for medical care and supervision, to be published this fall.

DID YOU KNOW that approximately 53 per cent of fatal home accidents occur in the bedroom. According to recent statistics, this is almost 3.5 times greater than the accident rate for living and dining rooms.

It has also been reported that one out of every 18 persons in the United States suffered a disabling injury last year.

CONGRATULATIONS to "The AMA News", which made its debut on August 11. The News is a fortnightly publication with a new concept of reporting news to physicians. The purpose of the News is to help physicians better understand the day to day problems that go with the practice of medicine.

The publication will keep physicians informed on legislation, business, court decisions in the medico-legal field and other news of particular interest. It will even carry articles on travel, sports, hobbies and the arts. This is truly the physician's newspaper and might well become medicine's greatest conduit of communication.

INQUIRIES have been received concerning organizations listed as the American Registry of Doctor's Nurses and Certified Nurses Aids of America, Inc. From information received from the American Nurses Association and the Virginia State Nurses Association, it appears that these organizations are commercial in nature and are not recognized by professional associations in the health field.

"THE MEDICINE MAN" is the title of a new film just completed by the American Medical Association. Prepared especially for airing over local television stations under the auspices of local medical societies, this 27-minute production dramatically pinpoints the fight against quackery in the food and nutrition field. It singles out problems which stem from health lecturers who travel from town to town giving misinformation on nutrition as a tie-in to plugging their products of questionable merit and from door to door salesmen who misrepresent the value of nutritional products. The film also shows how the medical profession cooperates with the Food and Drug Administration and such agencies as the National Better Business Bureau.

Prints will be available to local medical societies after September 15. They may be secured from the AMA TV Film Library.

A GROUP PRACTICE ROSTER is now in the process of being completed by the AMA. Thus far, information has been received on 989 groups located in the United States, Hawaii and Canada. Verification sheets have been sent to those groups already on file. Physicians who practice in groups of two or more, and have not received a check sheet, are invited to send the following information to the AMA Council on Medical Service: group practice name, address, office building (indicate whether rented or owned), number of physicians and the specialties represented.

ALL ROADS LEAD TO RICHMOND FROM OCTOBER 12-14. MAKE SURE

YOU ATTEND THE ANNUAL MEETING

News....

New Members.

Since the list published in the August issue of the Monthly, the following new members have been admitted into The Medical Society of Virginia:

James Perry Charlton, M.D., Virginia Beach
William F. Enos, M.D., Fairfax
Allan Hall, M.D., Arlington
Robert William Iden, M.D., Warrenton
William Rayner Johnson, M.D., Winchester
James Louis Keating, M.D., Arlington
Alvin B. H. Mirmelstein, M.D., Newport News
William Floyd Olinger, M.D., Big Stone Gap
Lawrence Joseph Zaino, M.D., Hampton

Headquarters Building.

It is hoped that by the time this issue of the Monthly reaches you, the staff of The Medical Society of Virginia will be in the process of packing up to move to the new headquarters at 4205 Dover Road, Richmond.

The building will be open for inspection to our members at any time, but more specifically it will be dedicated and open-house held during the time of the annual meeting in Richmond, October 12-14. It is hoped that all of our members and their guests will avail themselves of the opportunity to inspect their new headquarters as it is a building of which you should be very proud.

New Medical Exhibit at Jamestown.

The exhibit, which includes an early Virginia hospital and 17th century surgical instruments and medical books, shows how ill-prepared early settlers were in coping with health problems. The hospital model is a replica of one built near the James River Rapids (now the lower part of Richmond). Three of the instruments used by colony physicians during the 1600's for amputation of limbs are displayed. There are also rare medical treatises on display.

All items in the new exhibit were loaned by the history section of the Richmond Academy of Medicine. Other cooperating groups sponsoring the exhibit include the Medical College of Virginia Foundation, The Medical Society of Virginia and the Virginia Academy of General Practice.

The exhibit is open from 9:00 A. M. to 5:00 P. M. daily.

Dr. June C. Shafer,

Arlington, has been elected as secretary-treasurer of the Washington Dermatological Society. Dr. Raymond Osbourn is chairman and Dr. Peter N. Horvath, vice-chairman. Both are of Washington, D. C. Meetings are held in Washington on the fourth Thursday of every month from September through May.

Dr. A. E. Powell,

President of the Madison County Recreation Center was honored recently for his contributions to the Center. He was cited for his efforts in obtaining a swimming pool for the center and for his work in its development. Dr. Powell was presented with a silver tray on behalf of the organization.

Conference on Mental Retardation.

Dr. Benedict Nagler, Superintendent of the Lynchburg Training School and Hospital, Colony, announces a Conference on Research and Training in the Field of Mental Retardation to be held at The Training School on September 11 and 12. The Conference has been made possible by a Mental Health Project Grant from the Public Health Service. Outstanding leaders in psychiatry, neurology, psychology, education, social work, and nursing will address the meeting. The Conference is open to all professionally interested in Mental Retardation and further information may be obtained from Dr. Nagler.

Dr. William D. Prince,

Trial justice and country court judge in Sussex County, has retired from the bench after twenty-six years of service. He practiced medicine from 1895 to 1932. Dr. Prince is eighty-six years of age and is one of Sussex County's most widely known citizens. He has tried 35,763 cases and "each one was handled with a characteristic humor, common sense and fairness."

Dr. John B. Gorman

Has returned to Lynchburg and will be associated with his father, Dr. James R. Gorman, in the practice of ear, nose and throat diseases. He has recently been with the department of otolaryngology of the University of Virginia School of Medicine where he also held a fellowship in otolaryngology for 1955-56.



Once again The Medical Society of Virginia has recognized the contributions to health being made by members of the 4-H Club. Dr. J. R. York, Berryville, recently represented the Society and its Committee on Rural Health at a special award ceremony in Blacksburg.

The award recipients from left to right are: Jackie Insley, York County; Dr. York; Linda Murphy, Clark County; Joseph Vasko, III, Henrico County; and Carolyn Morrison, Rockbridge County.

The Radford Community Hospital

Held their Fourteenth Annual Banquet and Scientific Program on July 24th. The guest speaker was Dr. Earl D. McBride, Clinical Professor of Orthopaedic Surgery, Oklahoma University School of Medicine, and Chief of Staff of the Bone and Joint Hospital and McBride Clinic, Oklahoma City, Oklahoma. His subject was Disability Evaluation.

Dr. Paige E. Thornhill,

Norfolk, has been appointed by Governor Almond to a Commission to Study Problems Relating to Children Born out of Wedlock.

Dr. William D. Keck

Has recently joined the Staff of Saint Albans Psychiatric Hospital in Radford. Dr. Keck was formerly a Fellow in Psychiatry and Assistant Clinical Director at Graylyn Hospital in Winston-Salem, North Carolina.

The Eye Bank

And Sight Conservation Society of Virginia has been asked to be affiliated with the National Eye Bank in New York City, and the director, Dr. E. G. Gill, Roanoke, has been elected a member of the Council.

Tennessee Valley Medical Assembly.

This Assembly, sponsored by the Chattancoga and Hamilton County Medical Society will be held at the Read House, Chattanooga, September 29th and 30th. Speakers include Dr. Owen H. Wangensteen, Minneapolis; Dr. William R. Arrowsmith, New Orleans; Dr. John Parks, Washington, D. C.; Dr. Paul E. McMaster, Los Angeles; Dr. E. Perry McCullagh, Cleveland; Dr. Merrill O. Hines, New Orleans; Dr. Vincent J. Collins, New York; Dr. McLemore Birdsong, Charlottesville; Dr. Manuel R. Lichtenstein, Chicago; Dr. John R. Snavely, University of Mississippi; Dr. Kenneth M. Warren, Boston; Dr. Robert Greenblatt, Atlanta; Dr. Julian Ruffin, Durham; Dr. Francis Chamberlain, San Francisco; Dr. Richard H. Overholt, Boston; Dr. William Altemeier, Cincinnati; Dr. Waltman Wal-

ters, Rochester; and Dr. Herbert Rattner, Chicago.

The program is approved for postgraduate study, Category I, for members of the American Academy of General Practice. Further information may be obtained from the Tennessee Valley Medical Assembly, 109 Medical Arts Building, Chattanooga 2, Tennessee.

Symposium on Carcinoma of the Colon and Rectum.

This symposium will be presented at the annual scientific session of the American Cancer Society to be held October 20-21 at the Biltmore Hotel, New York. There will be discussions on Pathogenesis and Etiology of Cancer of the Rectum and Colon, Diagnosis of Cancer of the Colon and Rectum, Meeting the Problem of Spread of Cancer of the Colon and Rectum, and the Treatment.

Inquiries concerning this program should be addressed to Director, Professional Education, American Cancer Society, Incorporated, 521 West 57th Street, New York 19, New York.

American Rhinologic Society.

This Society will hold its fourth annual meeting in the Palmer House, Chicago, October 17-18. Among the topics to be discussed will be pulmonary and nasal physiology, laboratory and clinical aspects of bone transplants, hump removal, roof repair, and nasal process corrections.

The profession is cordially invited to attend as guests and there will be no registration fee. For further information, write Dr. Robert M. Hansen, secretary of the Society, 1735 North Wheeler Avenue, Portland 17, Oregon.

Wanted.

Internist, residency completed, for well established Virginia group. Associated excellent hospital. Partnership after one year. No stock to buy, no home calls, vacation, study and sick benefits. Apply to Box #500, care the Virginia Medical Monthly, P. O. Box 5085, Richmond 20. Send full information with first letter. (*Adv.*)

For Sale.

Office and equipment and/or home of Dr. W. H. Malan, Dublin, Virginia. Good terms. Excellent opportunity for young physician to take over this practice. Reply to Dr. W. H. Malan, 420 LeHigh Street, Lake City, Florida. (*Adv.*)

Wanted.

A pediatrician for the Lebanon General Hospital, Inc., Lebanon, Virginia.

A surgeon for the Clinchfield Hospital, Dante, Virginia.

A general practitioner for Dante, Virginia.

For information, contact Dr. W. C. Elliott, Lebanon General Hospital, Lebanon, Virginia. (*Adv.*)

Wanted to Buy.

One used but fairly recent model, 100 or 200 MA x-ray machine with bucky, timers and table. Must be in excellent and usable condition and seller must guarantee same set up here before complete payment. Price must also be compatible with used equipment. Advise what you have, price and year of model. Not interested in other equipment as this desired unit will replace present unit. Contact Dr. W. B. Barton, Stonega Hospital, Stonega, Virginia. (*Adv.*)

For Sale.

X-ray unit. G. E. Model DRF, 20 MA with bucky table and accessories. Contact Dr. F. R. Crawford, Farmville, Virginia. (*Adv.*)

Doctors Wanted.

Expanding General Practice Group seeks additional members under age 35. One and one-half years association prior to partnership is required. Inquiries invited. W. P. Locke Clinic, Hyde Park, New York. (*Adv.*)

Office Available.

Doctors' Suite available in medical building at very busy, large apartment community of 10,000—with immediate surrounding area of 20,000 more. Three rooms and bath. This is a wonderful opportunity. Contact L. F. Kettell, 313 North Glebe Road, Arlington 3. Phone Jackson 2-5004. (*Adv.*)

Doctor's Suite Available.

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Obituaries . . . .

Dr. John William Rosser Smith,

Charlottesville, died July 19th, at the age of eighty-two. He received his medical degree from the University of Virginia in 1900. Dr. Smith first practiced in Pocahontas County, West Virginia, and returned to Albemarle County in 1923 where he practiced until his retirement in the mid 30's. He was a Life Member of The Medical Society of Virginia, having joined in 1924.

Dr. Smith is survived by his wife and three daughters.

Dr. Dan Oscar Nichols,

Charlottesville, died July 24th, after a short illness. He was fifty-seven years of age and a native of West Virginia. Dr. Nichols received his medical degree from the University of Virginia in 1926 and had practiced in Charlottesville since 1932. He had been a member of The Medical Society of Virginia for twenty-five years.

Dr. Nichols is survived by his wife and two daughters.

Dr. William Hunt Walcott,

Alexandria, died May 27th, at the age of seventy-five. He was a graduate of the Baltimore Medical College in 1908. Dr. Walcott was formerly a member of The Medical Society of Virginia.

Dr. Mowry.

Dr. George Edward Mowry, a member of this staff since 1953, died on June 3, 1958, at the age of 35 of acute myelogenous leukemia. He was born in Derry, Pennsylvania, the son of Victor R. Mowry and Nellie Hogg Mowry.

Dr. Mowry received his B.A. degree from Washington and Jefferson College and was graduated in medicine from Temple University in 1952. Following graduation, he served a rotating internship at Riverside Hospital and then began the general practice of medicine at Wicomico, in Gloucester County. He was a member of the Mid-Tidewater Medical Association, American Association of General Practice, and The Medical Society of Virginia. Surviving him are his wife, the former Miss Cornelia Nye, a son and two daughters.

During his few years of practice in Wicomico, Dr. Mowry built up a large and devoted following and was well established in the community. He quickly developed the tolerant understanding of the good physician and his patients respected and loved him. He continued to care for his most needy patients up to the last few weeks of his critical illness. He never lost his cheerfulness, or his hearty good humor, which was one of his finest characteristics. Our profession has suffered a real loss and he will be greatly missed by his patients and friends.

THEREFORE, BE IT RESOLVED, that the members of the Riverside Hospital Staff extend their deepest sympathy to the family of our departed colleague.

BE IT FURTHER RESOLVED that this resolution be recorded in the minutes of this meeting and copies sent to the family and to the Virginia Medical Monthly.

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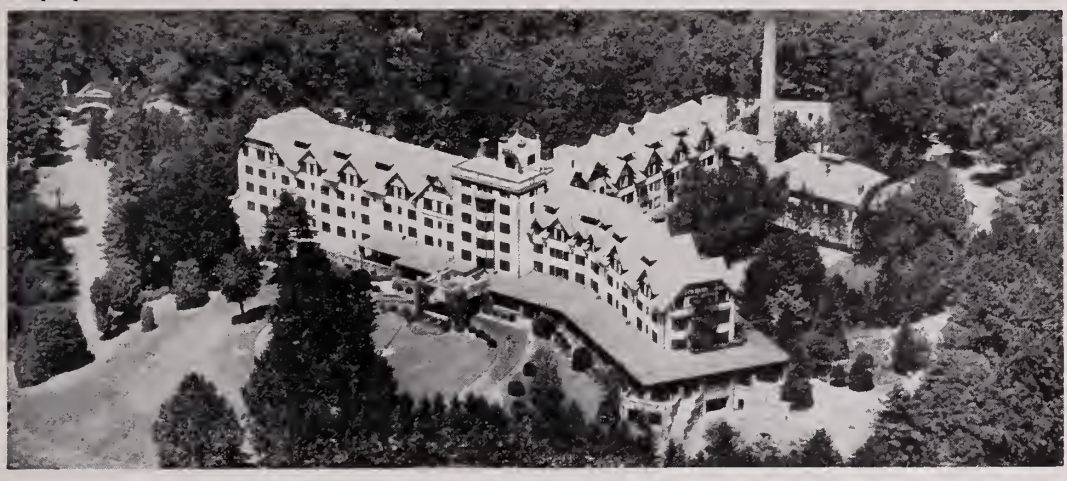
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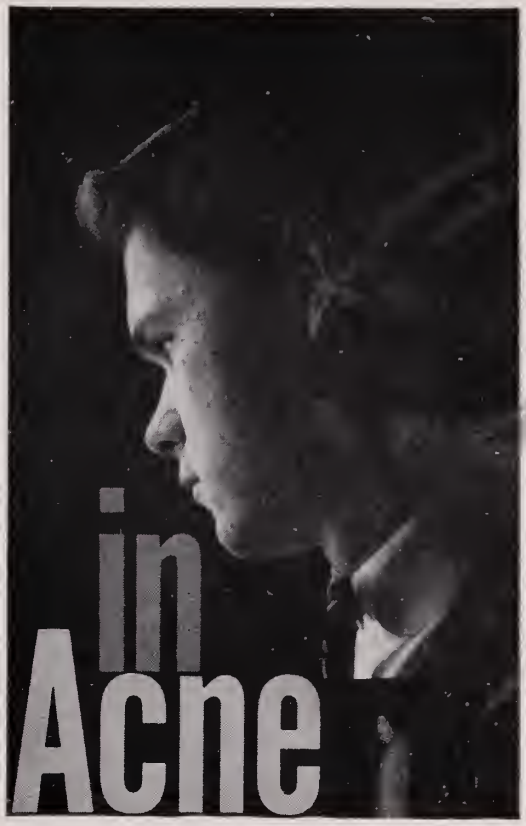
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1. Hodges, F. T.: *GP* 14:86, Nov., 1956.

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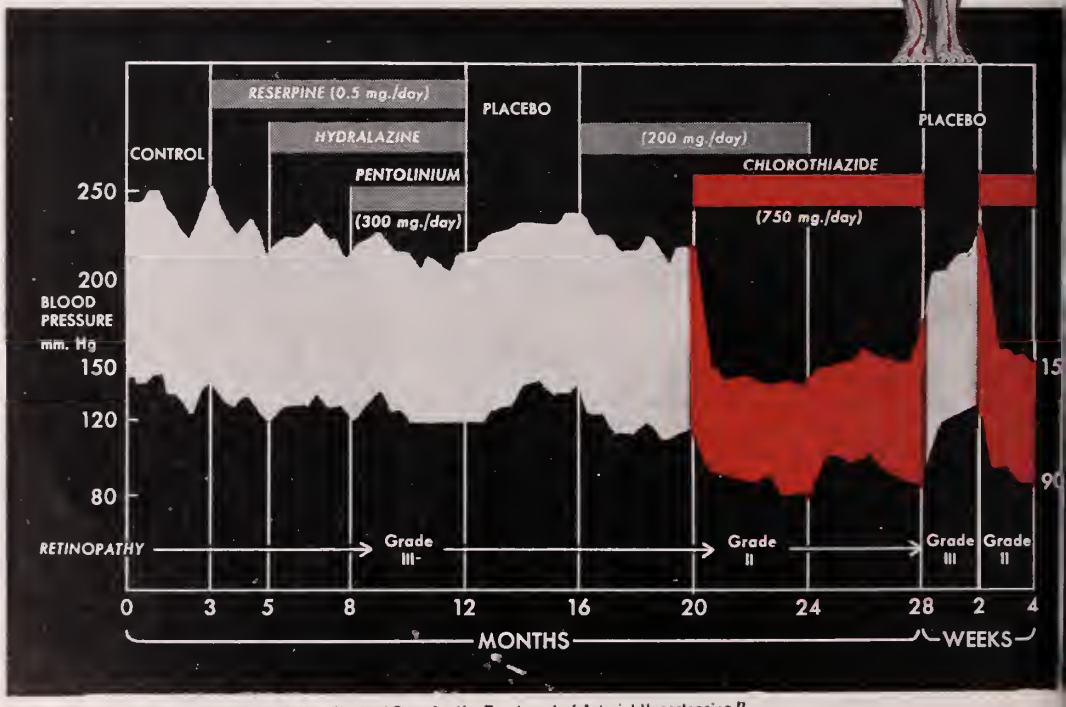
Wilkins, R. W.: New England J. Med. **257**:1026, Nov. 21, 1957.

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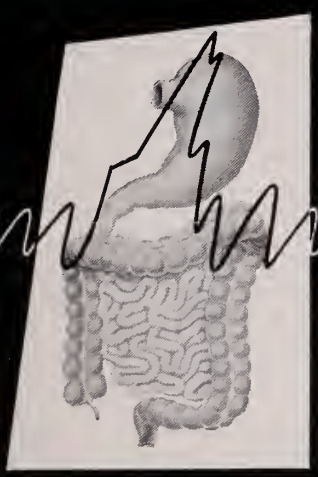
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1. Russek, H. I.: Postgrad. Med. *19*:562 (June) 1956.

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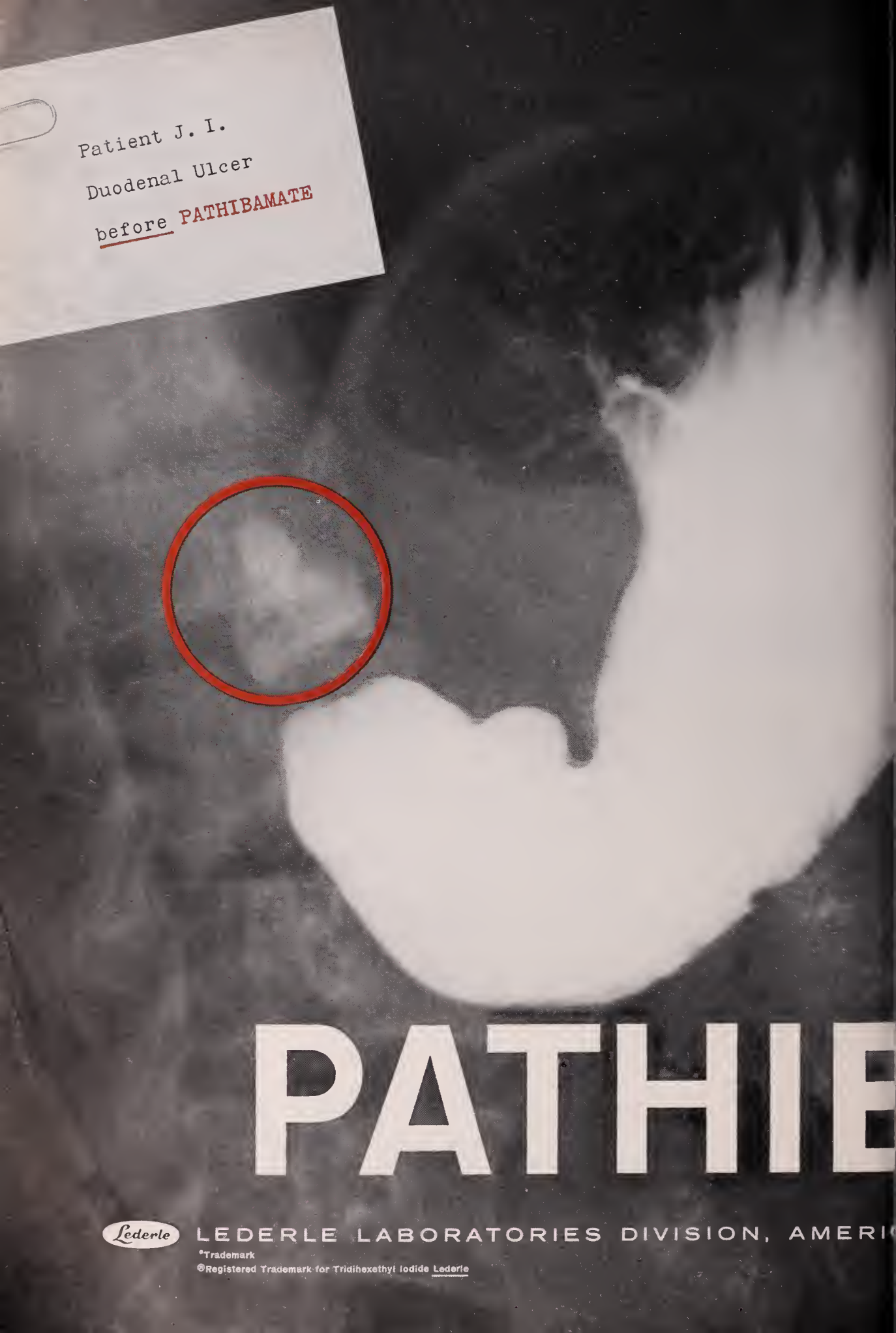
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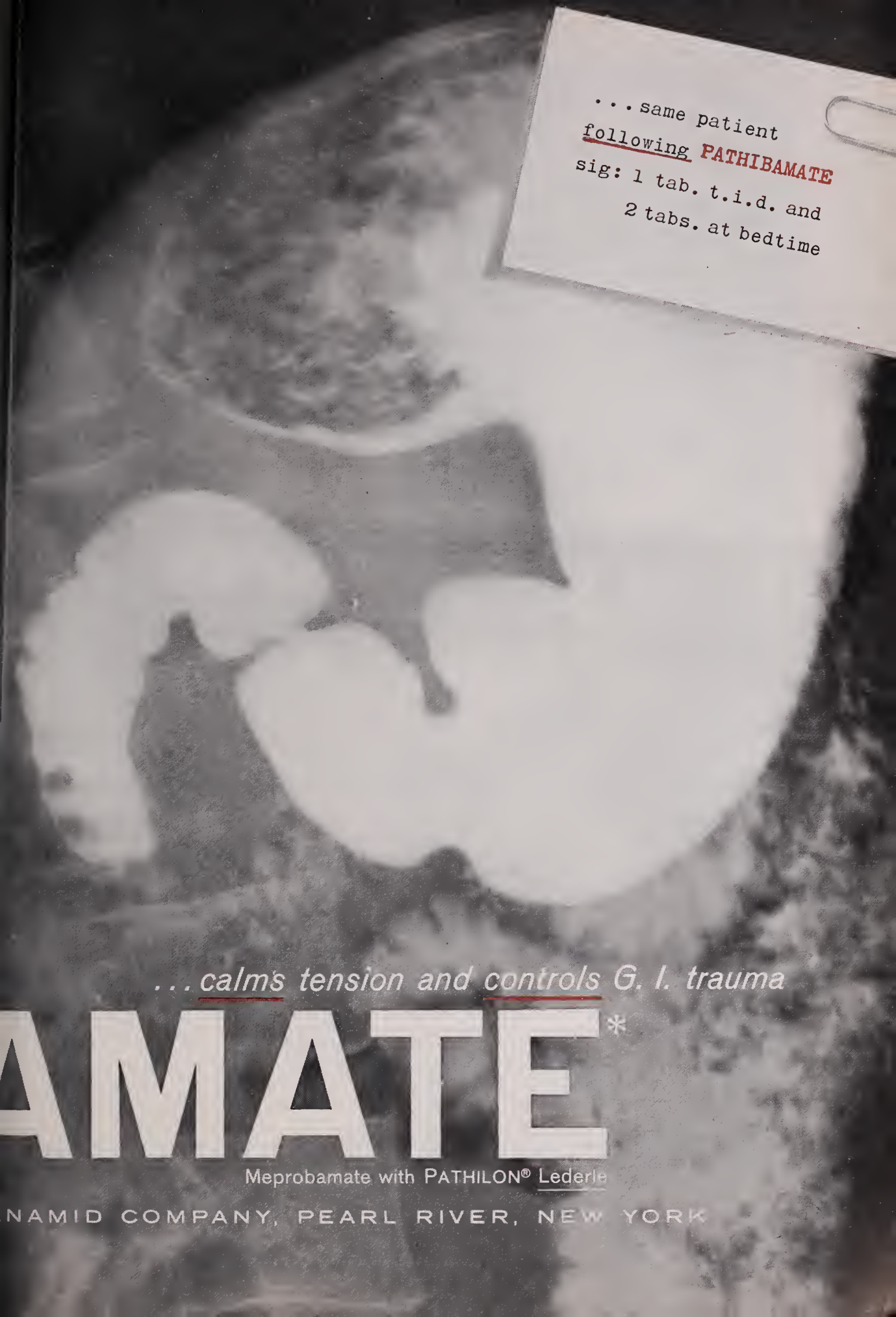


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Standard one-formula mixture

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FORMULA	OZ.	TOTAL CALORIES	CARB. CAL.	FAT CAL.	PROT. CAL.
Whole milk	24	480	5%	36%	14%
Water	22	—	—	—	—
Karo Syrup	1½	180	45%	—	—

EVAPORATED MILK FORMULA

FORMULA	OZ.	TOTAL CALORIES	CARB. CAL.	FAT CAL.	PROT. CAL.
Evaporated milk	11	484	5%	36%	14%
Water	22	—	—	—	—
Karo Syrup	1½	180	45%	—	—

An infant will usually take 2 to 3 ounces more than his *age in months* at 3 to 4 hour intervals to satisfy his appetite and nutritional needs. It is psychologically unwise to force prescribed amounts. Normally, the gain in weight of 6 to 8 ounces a week during the earlier months gradually diminishes to 3 to 4 ounces a week by the end of the first year. The standard one-formula mixture not only provides adequate nutrition when vitamin supplements are added; it also provides educational opportunities to prevent feeding problems.

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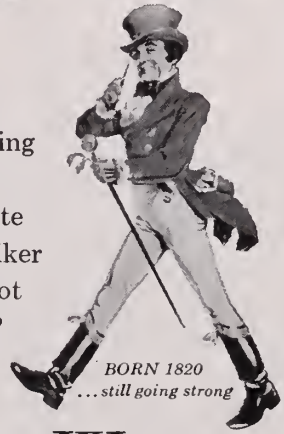
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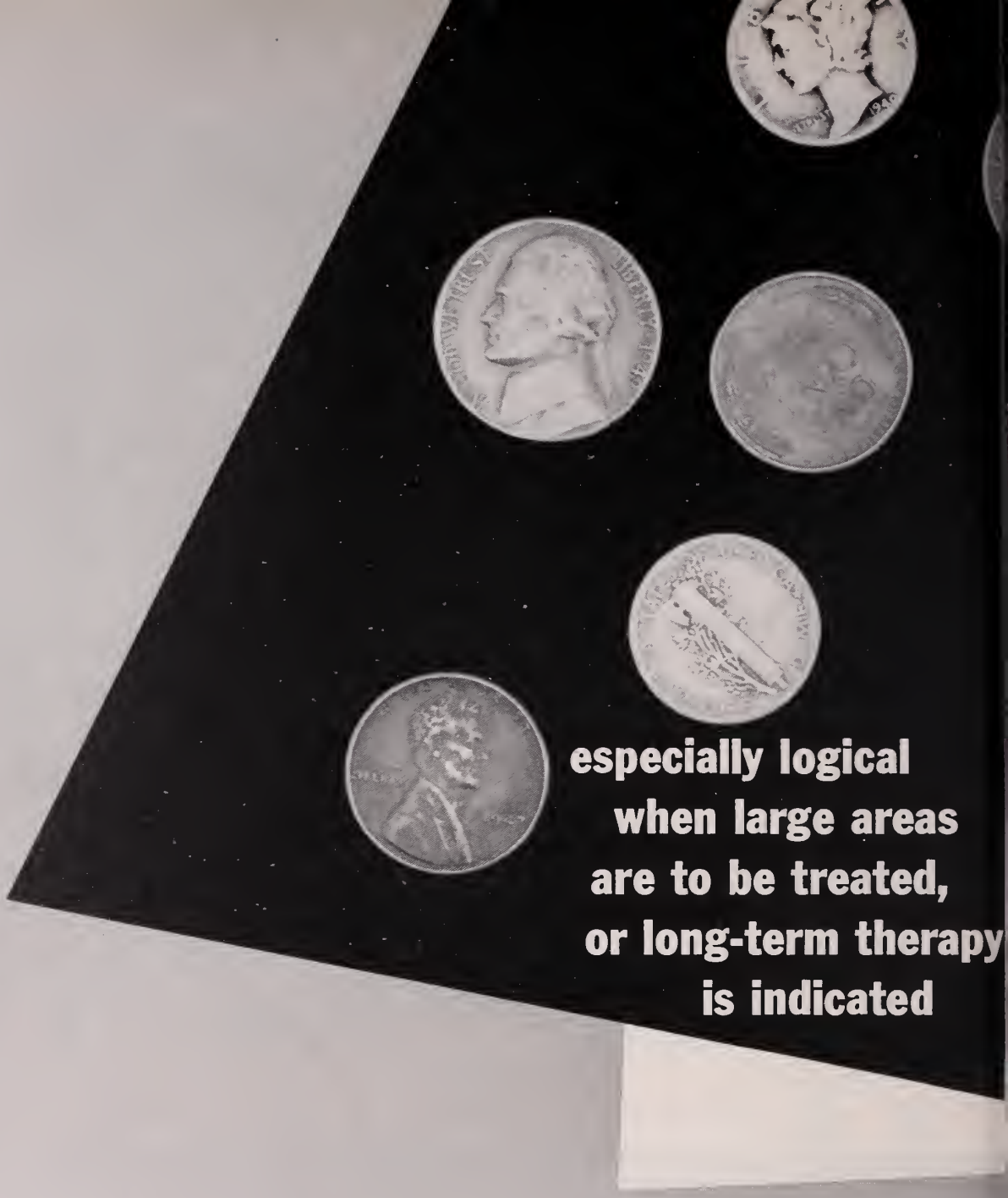
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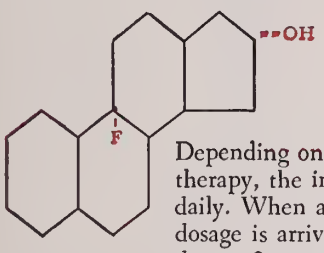
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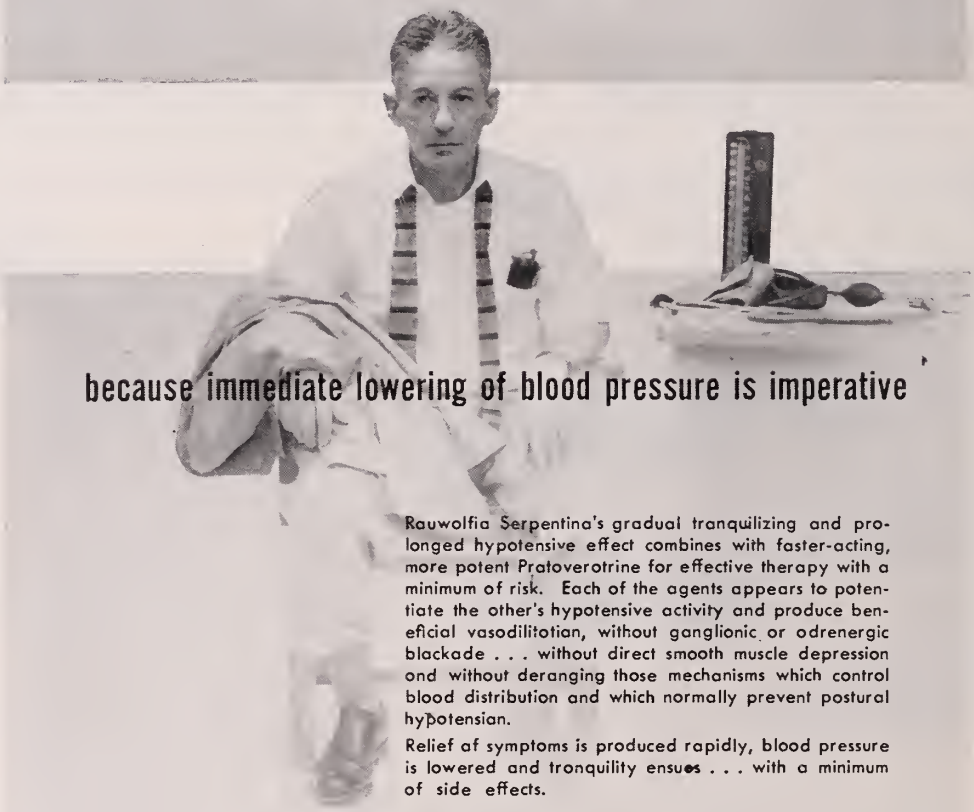
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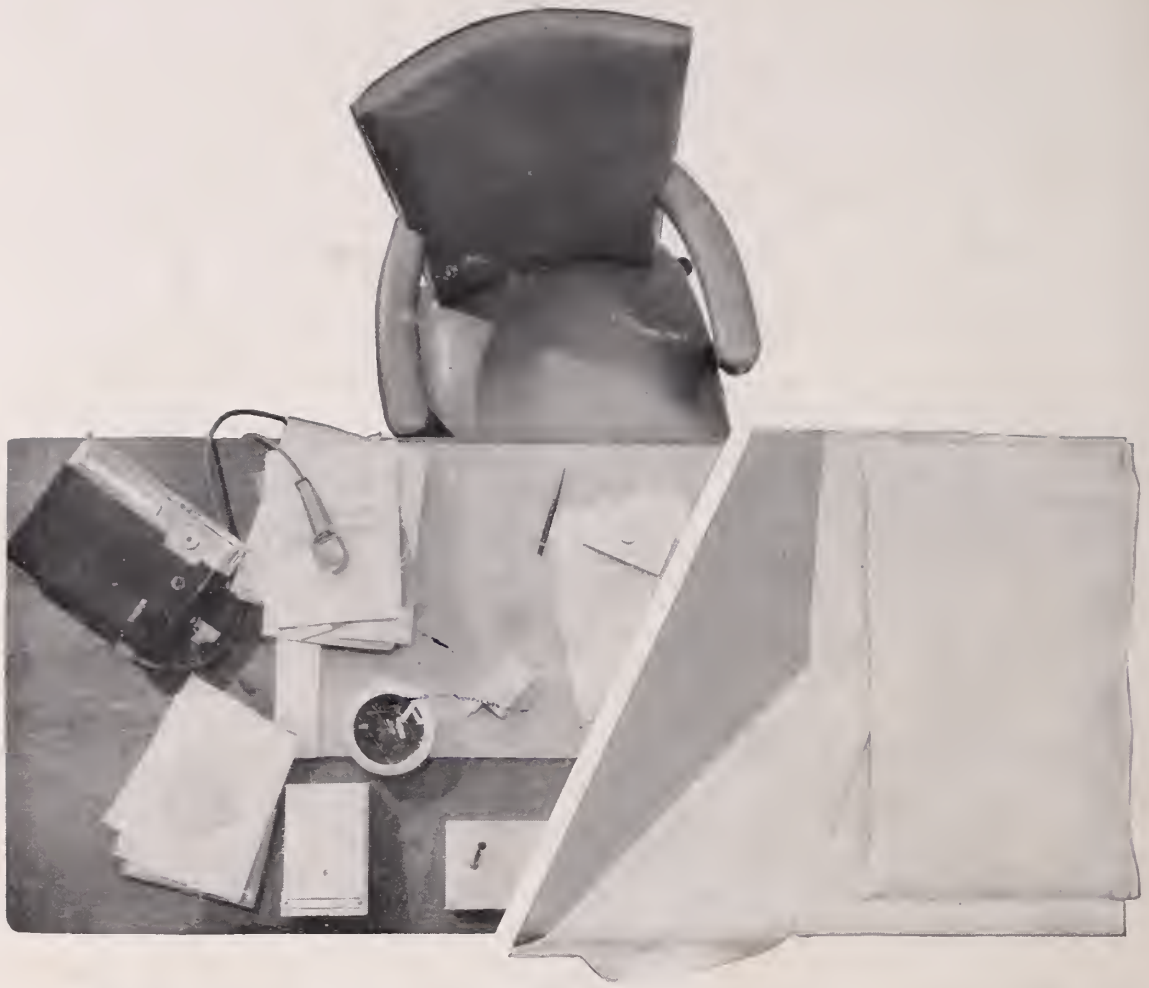
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in amenorrhea . . .

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CASE SUMMARY[2] Amenorrhea of four years' duration in a 24-year-old mar woman. A course of 10 mg. NORLUTIN, twice daily for five days, was follo after three days by menses. When no spontaneous menstruation occurred du the following 35 days, this treatment was repeated and again induced me Using ethisterone, similar results were unobtainable in this patient.

INDICATIONS FOR NORLUTIN: conditions involving deficiency of progesterone su primary and secondary amenorrhea, menstrual irregularity, functional uterine blee endocrine infertility, habitual abortion, threatened abortion, premenstrual tension, dysmenorrhea.

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REFERENCES: (1) Greenblatt, R. H., & Jungck, E. C.: *J.A.M.A.* 166:1461 (Mar. 22) 1958. (2) Hert Waite, J. H., & Thomas, L. B.: *Proc. Soc. Exper. Biol. & Med.* 91:418, 1956.

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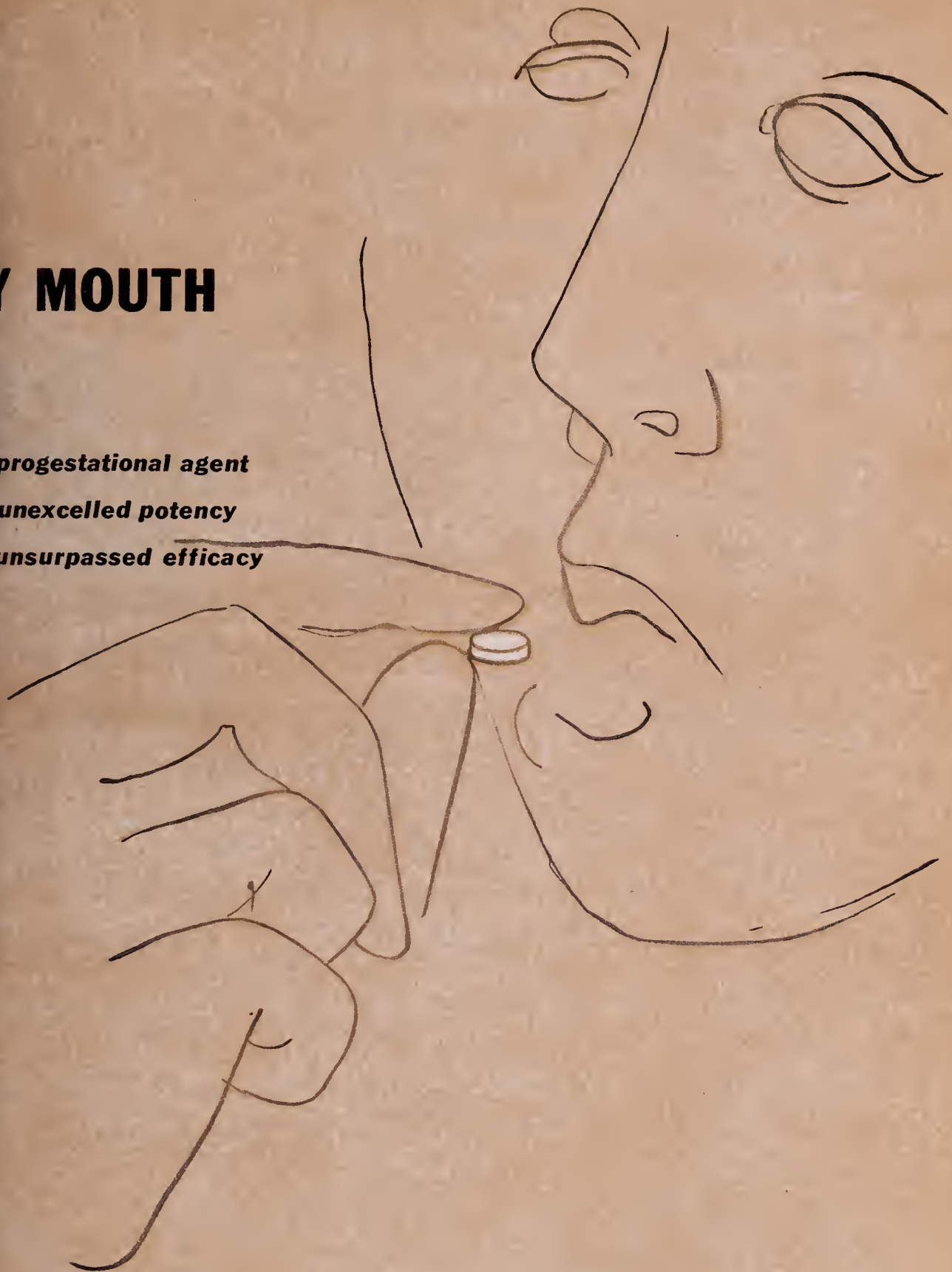
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why all the fuss over potassium?



Many physicians will recall when safe but potent organomercurials were first introduced. At the time there was considerable worry about possible potassium loss. Patients were instructed to take foods rich in this mineral, and not infrequently potassium supplements also were advised. After enough experience was gained, it became evident that only the exceptional case could lose enough potassium to be concerned about. And with oral organomercurial diuretics this was practically never a problem.

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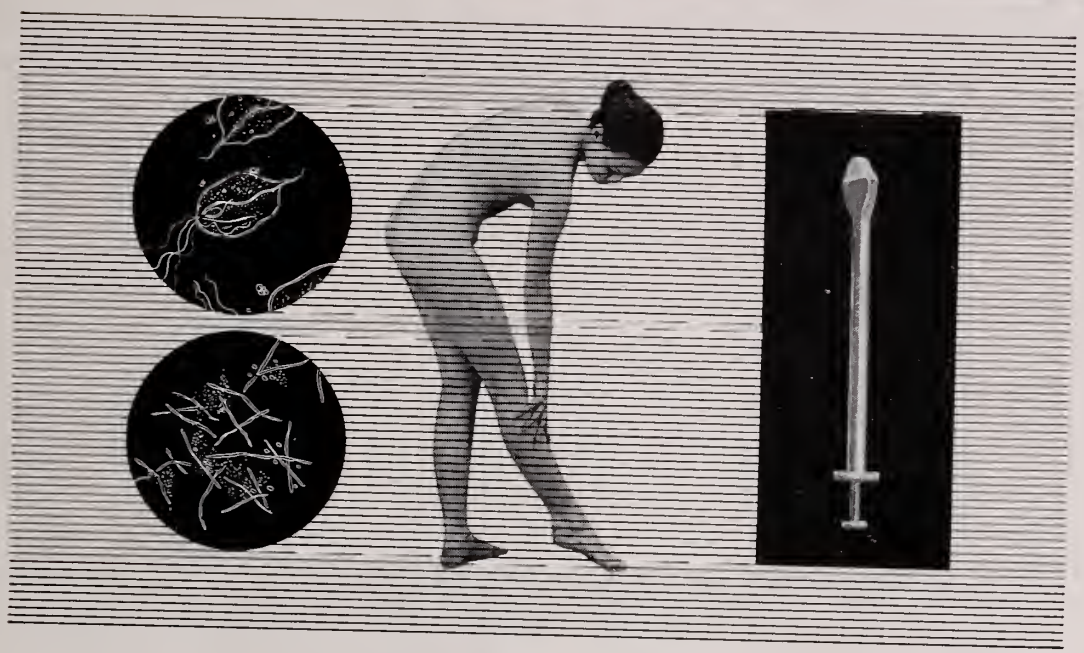
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1. Davis, C. H.: Trichomonas Vaginalis Infections: A Clinical and Experimental Study, J.A.M.A. *157:*126 (Jan. 8) 1955.
2. Pitt, M. B.: Leukorrhea, Causes and Management, J.M.A. Alabama *25:*182 (Feb.) 1956.
3. Lang, W. R.: Recent Advances in Vaginitis, Philadelphia Med. *51:*1494 (June 15) 1956.

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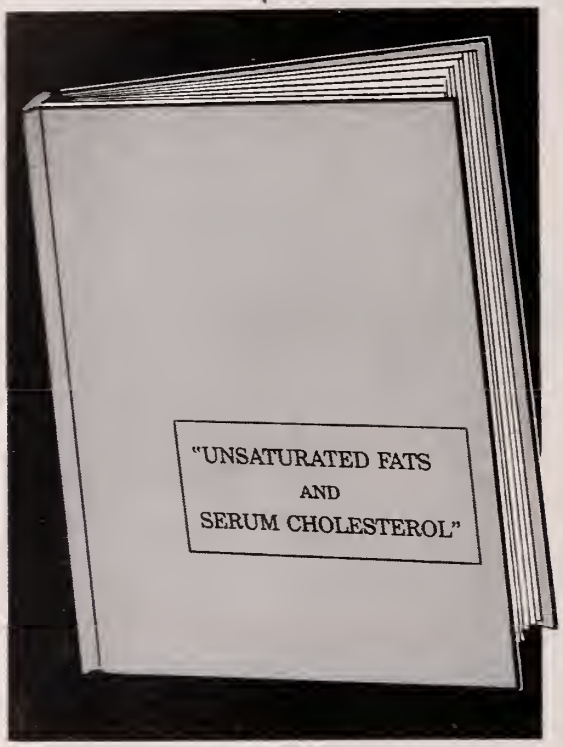
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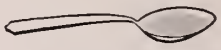
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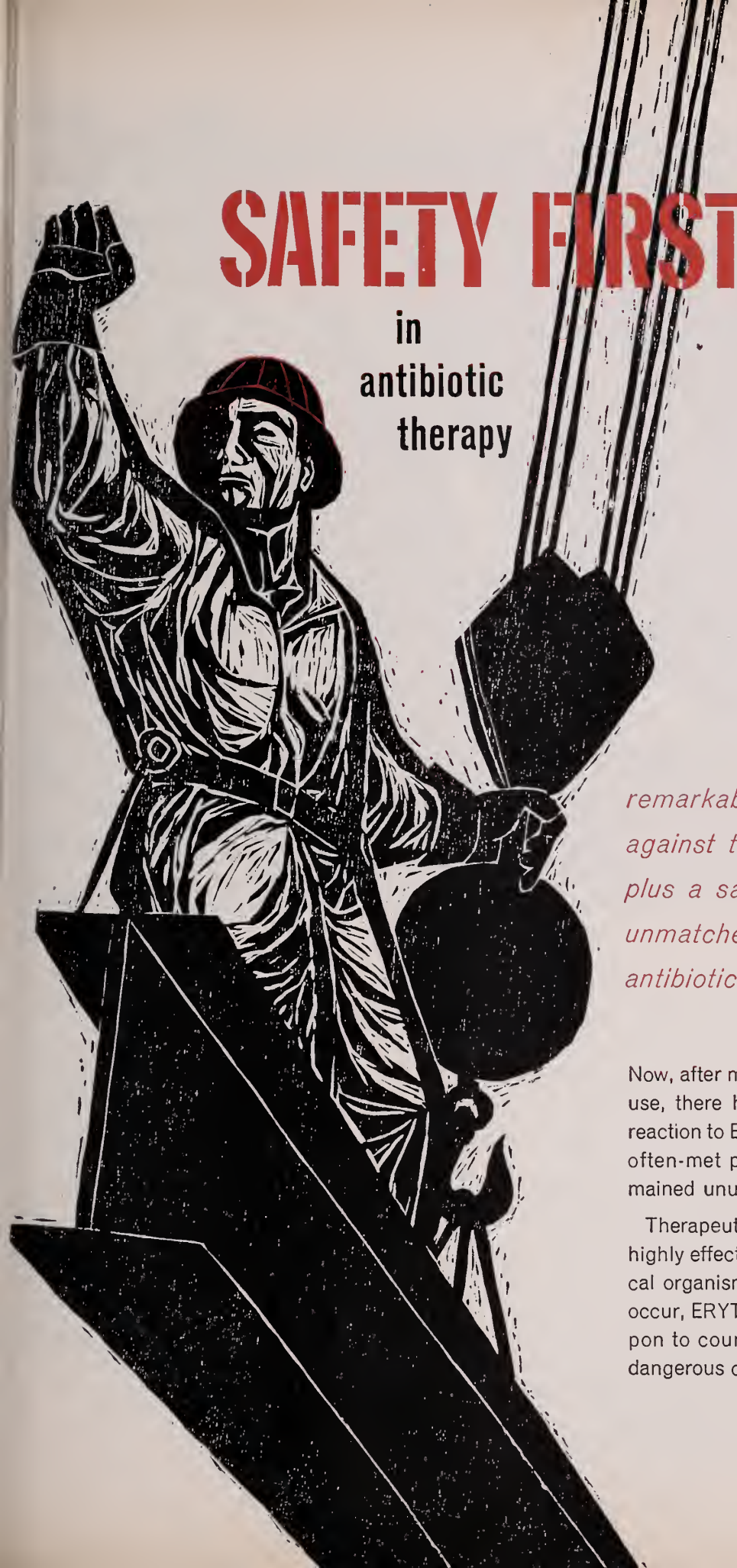
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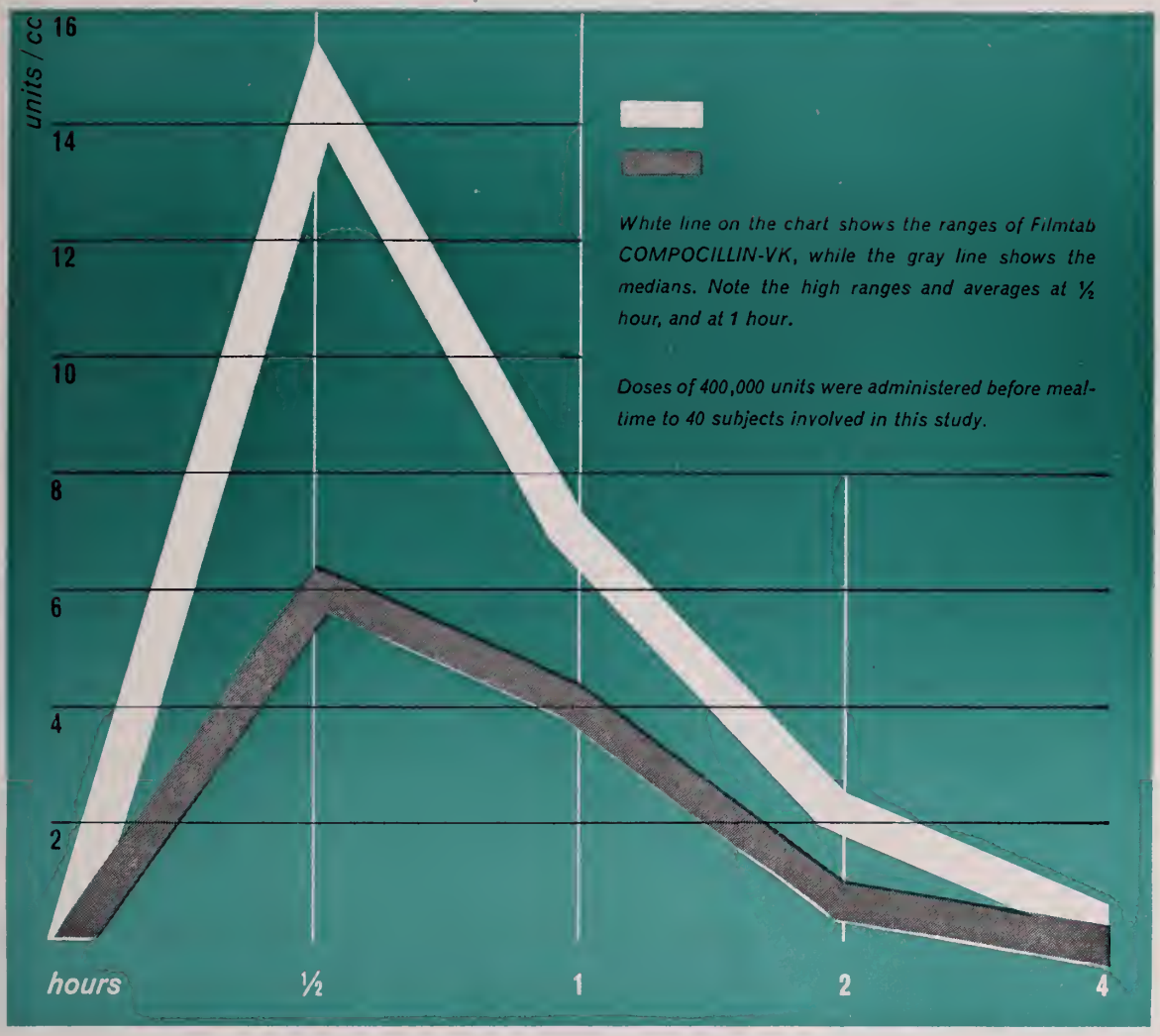
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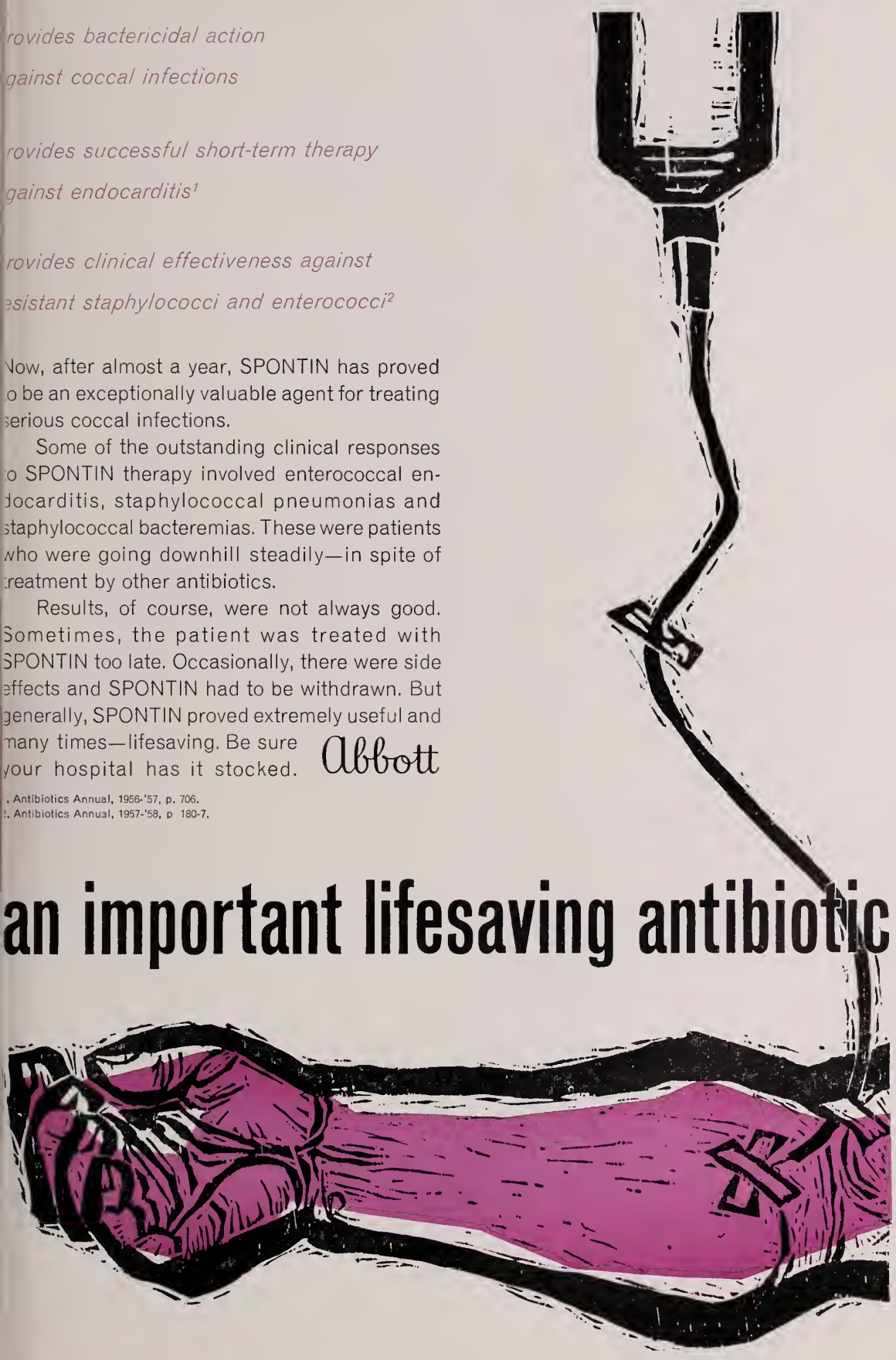
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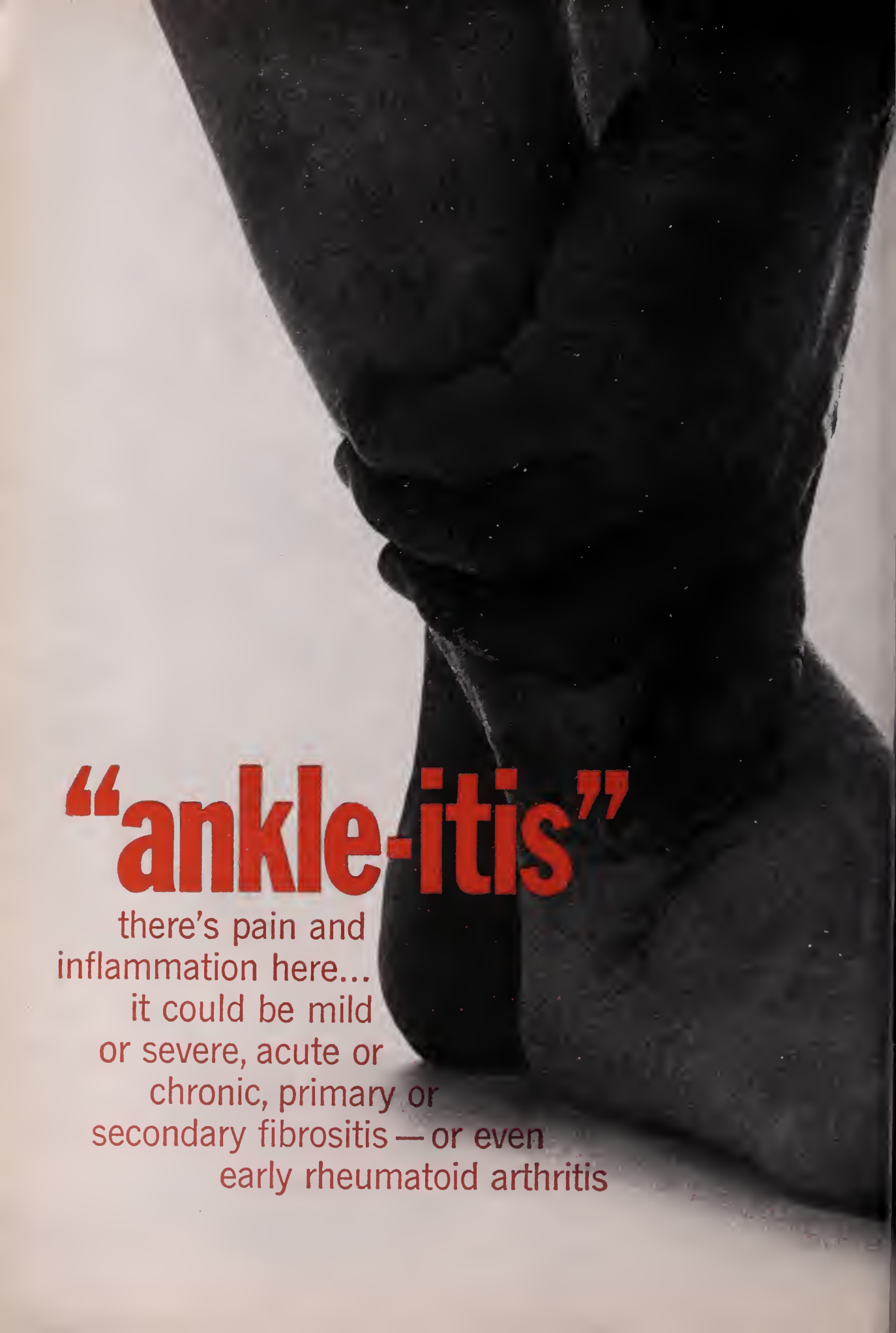
Some of the outstanding clinical responses to SPONTIN therapy involved enterococcal endocarditis, staphylococcal pneumonias and staphylococcal bacteremias. These were patients who were going downhill steadily—in spite of treatment by other antibiotics.

Results, of course, were not always good. Sometimes, the patient was treated with SPONTIN too late. Occasionally, there were side effects and SPONTIN had to be withdrawn. But generally, SPONTIN proved extremely useful and many times—lifesaving. Be sure your hospital has it stocked. Abbott

1. Antibiotics Annual, 1956-'57, p. 706.
2. Antibiotics Annual, 1957-'58, p 180-7.



an important lifesaving antibiotic


"ankle-itis"
there's pain and
inflammation here...
it could be mild
or severe, acute or
chronic, primary or
secondary fibrositis — or even
early rheumatoid arthritis

more potent and comprehensive treatment than salicylate alone

assured anti-inflammatory effect of low-dosage corticosteroid[1] . . . additive antirheumatic action of corticosteroid plus salicylate[2-5] brings rapid pain relief; aids restoration of function . . . wide range of application including the entire fibrositis syndrome as well as early or mild rheumatoid arthritis

more conservative and manageable than full-dosage corticosteroid therapy—

much less likelihood of treatment-interrupting side effects[1-6] . . . reduces possibility of residual injury . . . simple, flexible dosage schedule

THERAPY SHOULD BE INDIVIDUALIZED

acute conditions: Two or three tablets four times daily. After desired response is obtained, gradually reduce daily dosage and then discontinue.

subacute or chronic conditions: Initially as above. When satisfactory control is obtained, gradually reduce the daily dosage to minimum effective maintenance level. For best results administer after meals and at bedtime.

precautions: Because SIGMAGEN contains prednisone, the same precautions and contraindications observed with this steroid apply also to the use of SIGMAGEN.



in any case it calls for

Sigmagen®

corticoid-salicylate compound tablets

Composition

METICORTEN® (prednisone)	0.75 mg.
Acetylsalicylic acid	325 mg.
Aluminum hydroxide	75 mg.
Ascorbic acid	20 mg.

Packaging: SIGMAGEN Tablets, bottles of 100 and 1000.

References: 1. Spies, T. D., et al.: J.A.M.A. 159:645, 1955. 2. Spies, T. D., et al.: Postgrad. Med. 17:1, 1955. 3. Gelli, G., and Della Santa, L.: Minerva Pediat. 7:1456, 1955. 4. Guerra F.: Fed. Proc. 12:326, 1953. 5. Busse, E. A.: Clin. Med. 2:1105, 1955. 6. Sticker, R. B.: Panel Discussion, Ohio State M. J. 52:1037, 1956.

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to relieve edema of

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CHLOROTHIAZIDE

FINNERTY, F. A., Buchholz, J. H. and Tuckman, J.: J.A.M.A. **166**:141, Jan. 11, 1958.

DIURIL (Chlorothiazide) given alone to 85 patients, ". . . caused an excellent diuresis, with reduction of edema, weight, blood pressure, and albuminuria. . . . The average effective dose was found to be 1 Gm. per day by mouth. . . . The usually excellent response coupled with the absence of significant toxicity and lack of development of drug resistance makes chlorothiazide ideal for the prevention and treatment of toxemia."

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SUPPLIED: 250 mg. and 500 mg. scored tablets DIURIL (chlorothiazide); bottles of 100 and 1,000.

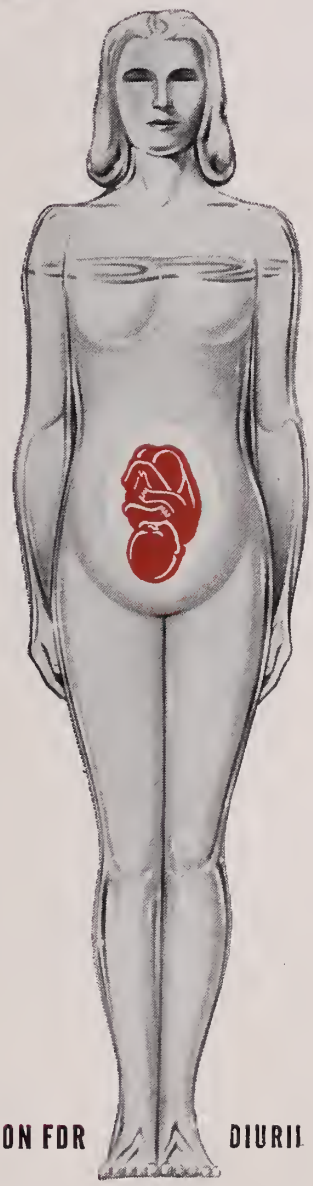
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. . . the preferred drug where anxiety or emotional agitation must be controlled

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. . . effects a gradual and sustained lowering of elevated blood pressure in patients with mild, labile or essential hypertension

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Now—the most widely prescribed tranquilizer[1] in sustained release capsules

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meprobamate (Miltown®) capsules



q. 12 h.

Two capsules on arising **last all day**
Two capsules at bedtime **last all night**
relieve nervous tension on a *sustained* basis, without between-dose interruption

"The administration of meprobamate in sustained action form [Meprospan] produced a more uniform and sustained action . . . these capsules offer effectiveness at reduced dosage."[2]

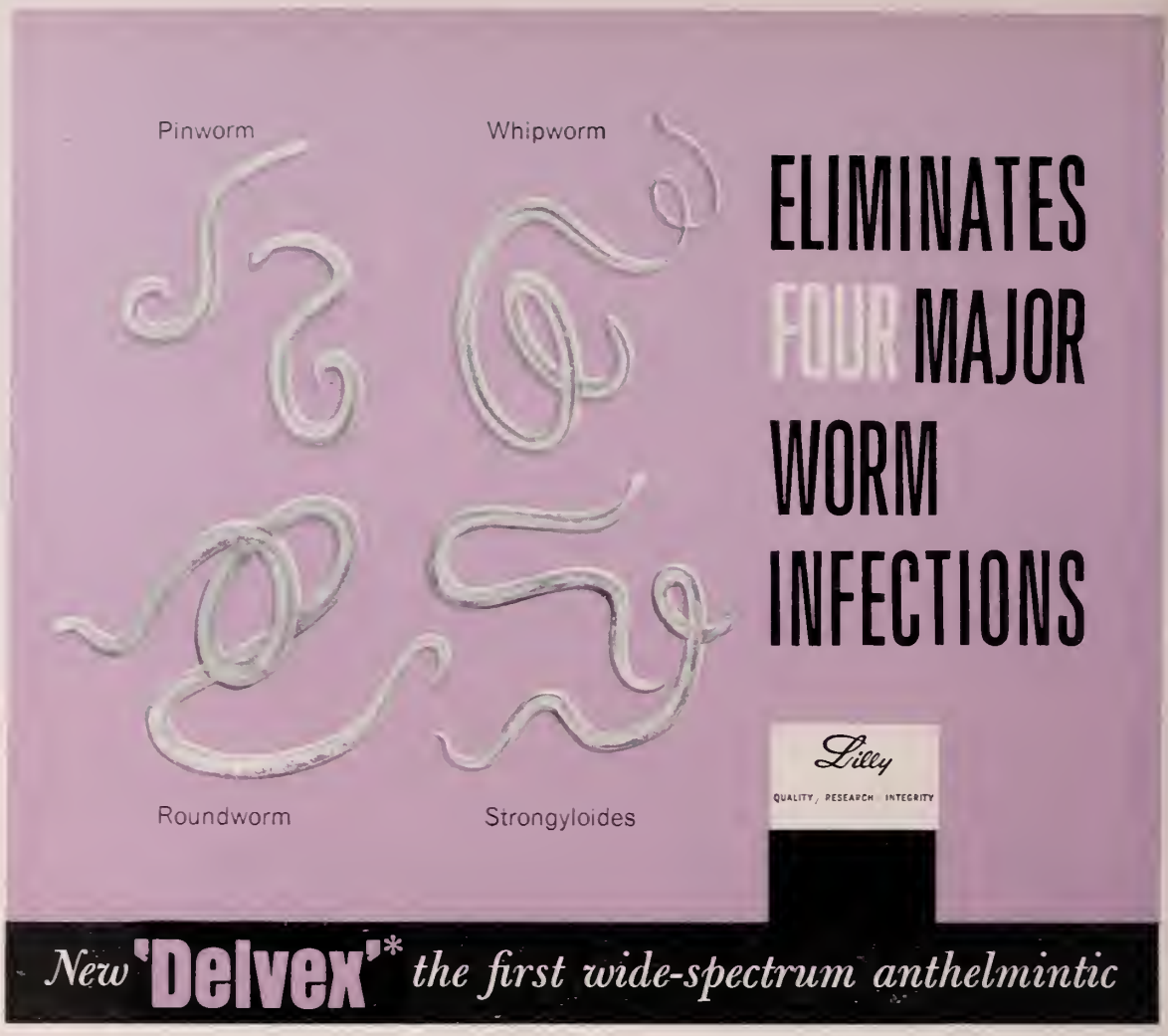
Dosage: 2 Meprospan capsules q. 12 h.
Supplied: 200 mg. capsules, bottles of 30.

1. Meprobamate is more widely prescribed than any other tranquilizer. Source: Independent research organization; name on request.
2. Baird, H. W., III: A comparison of Meprospan (sustained action meprobamate capsule) with other tranquilizing and relaxing agents in children. Submitted for publication, 1958.

Literature and samples on request

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Clinical studies[1] *show:*

- 'Delvex' is effective orally, usually within five days, against four of the five most common worm infections:

Pinworm	Whipworm
Roundworm	Strongyloidiasis

- It also inhibits, and sometimes eliminates, hookworm infection.
- It is fully effective in both single and multiple infections and in both heavy and light infections.
- It eliminates pinworm infection in 100 percent of patients.
- It is the first effective and practicable agent for the oral treatment of strongyloidiasis and whipworm infection.
- No adjunctive measures are needed with 'Delvex' therapy.

Further information and clinical reports may be obtained from your Lilly representative or by writing to our Medical Department.

*'Delvex' (Dithiazanine Iodide, Lilly)
1. Swartzwelder, J. C., et al.: J. A. M. A., 165:2063, 1957.

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Comments by investigators on

Robaxin®

(Methocarbamol Robins, U.S. Pat. No. 2770649)

Robins

– the remarkably efficient skeletal muscle relaxant, unique in chemical formulation, and outstanding for sustained action and relative freedom from adverse side effects.

PUBLISHED REFERENCES: 1. Carpenter, E. B.: Southern Medical Journal 51:627, 1958. 2. Forsyth, H. F.: J.A.M.A. 167:163, 1958. 3. Little, J. M., and Truitt, E. B., Jr.: J. Pharm. & Exper. Therap. 119:161, 1957. 4. Morgan, A. M., Truitt, E. B., Jr., and Little, J. M.: J. Am. Pharm. Assn., Sci. Ed. 46:374, 1957. 5. O'Doherty, D. S., and Shields, C. D.: J.A.M.A. 167:160, 1958. 6. Park, H. W.: J.A.M.A. 167:168, 1958. 7. Truitt, E. B., Jr., and Patterson, R. B., Proc. Soc. Exper. Bio. & Med. 95:422, 1957. 8. Truitt, E. B., Jr., Patterson, R. B., Morgan, A. M., and Little, J. M.: J. Pharm. & Exper. Therap. 119:189, 1957.

Supply: Tablets (white, scored), 0.5 Gm., bottles of 50 and 500.

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Ethical Pharmaceuticals of Merit since 1878

Summary of four new published clinical studies:

Robaxin Beneficial in 95.6% of Cases of Acute Skeletal Muscle Spasm[1, 2, 5, 6]

CONDITION	NO. PATIENTS	RESPONSE			
		"marked"	moderate	slight	none
STUDY 1[1]					
Skeletal muscle spasm secondary to acute trauma	33	26	6	1	—
STUDY 2[2]		"pronounced"			
Herniated disc	39	25	13	—	1
Ligamentous strains	8	4	4	—	—
Torticollis	3	3	—	—	—
Whiplash injury	3	2	1	—	—
Contusions, fractures, and muscle soreness due to accidents	5	3	2	—	—
STUDY 3[5]		"excellent"			
Herniated disc	8	6	2	—	—
Acute fibromyositis	8	8	—	—	—
Torticollis	1	—	—	1	—
STUDY 4[6]		"significant"			
Pyramidal tract and acute myalgic disorders	30	27	—	2	1
TOTALS	138	104 (75.3%)	28 (20.3%)	4	2



THE JOURNAL
American Medical Association

"In the author's clinical experience, methocarbamol has afforded greater relief of muscle spasm and pain for a longer period of time without undesirable side effects or toxic reactions than any other commonly used relaxants . . ."[2]

THE JOURNAL
American Medical Association

"An excellent result, following methocarbamol administration, was obtained in all patients with acute skeletal muscle spasm."[5]

THE JOURNAL
American Medical Association

"In no instance was there any significant reduction in voluntary strength or intensity of simple reflexes."[6]

Southern Medical Journal

"This study has demonstrated that methocarbamol (Robaxin) is a superior skeletal muscle relaxant in acute orthopedic conditions."[1]

In potentially serious infections...

[redacted]

[redacted]

[redacted]

[redacted]

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The Upjohn Company, Kalamazoo, Michigan



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Panalba*

mycin† Phosphate plus Albamycin**)

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f first resort

ective against more
n 30 common pathogens,
n including
istant staphylococci.

ble forms:

alba Capsules, bottles of 16 and 100
es. Each capsule contains:

cin phosphate (tetracycline phosphate
ex) equivalent to tetracycline hydro-
e .....250 mg.
ycin (as novobiocin sodium)...125 mg.

alba KM †† Flavored Granules. When
nt water is added to fill the bottle,
aspoonful (5 cc.) contains:

cin (tetracycline) equivalent to tetra-
hydrochloride .....125 mg.
cin (as novobiocin calcium)..62.5 mg.
ium metaphosphate .....100 mg.

a Capsules
ult dosage is 2 capsules q.i.d.

a KM Granules
treatment of moderately acute infec-
infants and children, the recom-
dosage is 1 teaspoonful per 15 to
f body weight per day, administered
4 equal doses. Severe or prolonged
s require higher doses. Dosage for
2 to 4 teaspoonfuls 3 or 4 times daily,
g on the type and severity of the in-

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To diabetics and their physicians, CLINITEST means rapid *and* reliable urine-sugar testing—standardized for accurate results every time. And now, the new streamlined model (No. 2105) gives your diabetics this standard test in the best looking, most efficient form.

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urine-sugar analysis set

- **functional:** full-view test tube always in place
- **refillable:** takes either bottle of 36 or sealed-in-foil CLINITEST reagent tablets
- **attractive:** two-tone, neutral gray plastic case

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What these 3 ions mean to your patients

CITRIC ACID

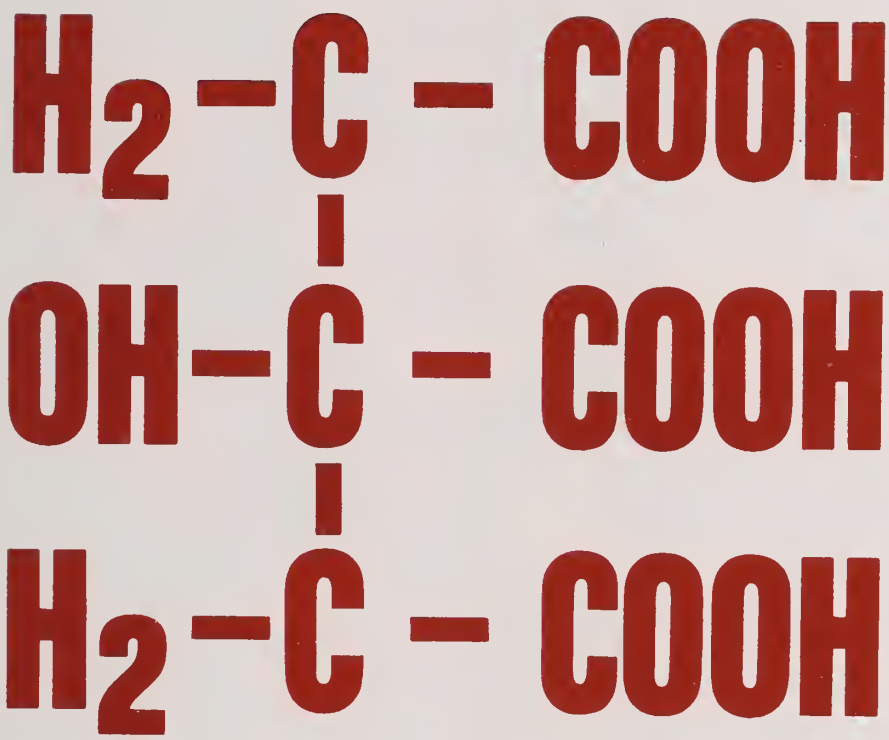
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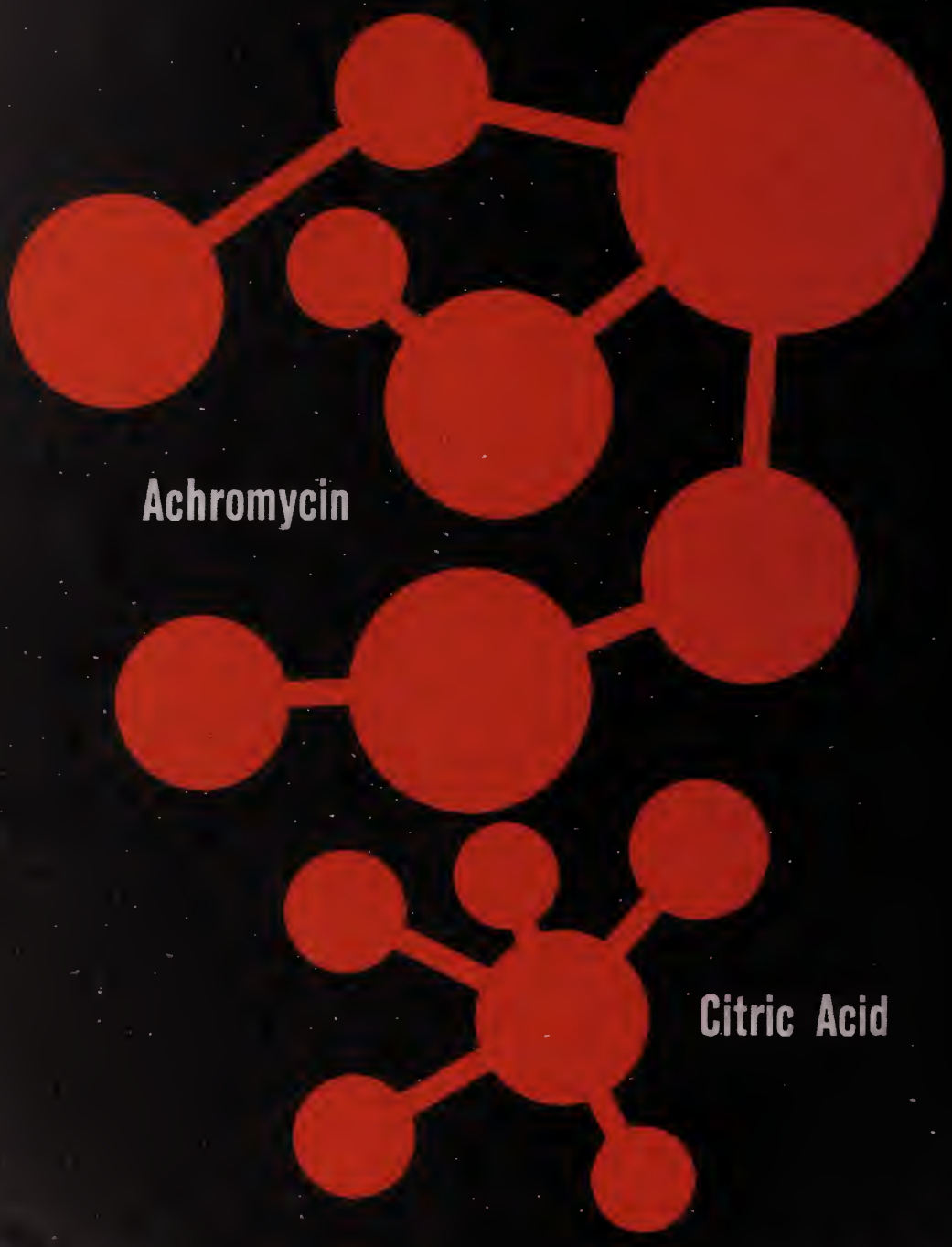
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triple assurance of maximum antibiotic potency

In developing ACHROMYCIN V, Lederle research scientists aimed for patient response rather than laboratory results, and chose citric acid for its outstanding value under clinical conditions. Citric acid is unique in that it contains THREE free carboxyl groups in every molecule to combine with the metallic ions which interfere with gastrointestinal absorption. This activity thus leaves the pure active tetracycline molecule available for full absorption and rapid action at the site of infection.

for unsurpassed performance at the clinical level . . .



Achromycin*

Achromycin* V

*TRADEMARK FOR CITRATE SALT OF TETRACYCLINE

ASSURES EVERY PATIENT PRECISE ANTIBIOTIC ACTION UNDER THE VARIED CONDITIONS OF REALISTIC CLINICAL PRACTICE

produces optimal gastric conditions

Ideally, most antibiotics are given on an empty stomach. Since citric acid helps control unfavorable variances in gastric content, conditions in the stomach are optimal with ACHROMYCIN V tetracycline with citric acid.

prevents interference with absorption

Sequestering of antibiotic molecules by free metallic ions, always present in the intestinal tract, can deprive patients of a full therapeutic dose. The three active carboxyl radicals which protect the action of ACHROMYCIN V trap these free cations and allow uninhibited antibiotic absorption.

provides for peak antibiotic action

At the site of infection where, in essence, all antibiotics are proved, ACHROMYCIN V combats a wide range of pathogens under optimal tissue conditions. Citric acid, a factor of medically established value in the natural acid-base regulating mechanism of the G.I. tract, facilitates a more complete, and rapid antibiotic action.

MORE DOCTORS PRESCRIBE ACHROMYCIN V THAN ANY OTHER BROAD-SPECTRUM ANTIBIOTIC

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STOPS MORNING SICKNESS, BUT...

Highest percentage of relief: In *Drugs of Choice*[3], clinical data on several therapies for nausea and vomiting of pregnancy is summarized. BONADOXIN afforded the highest percentage of relief in the "excellent" (79%) and "good" (16%) combined categories. The majority of cases were completely controlled in the first week of treatment, almost all on one tablet nightly.





Safe, too:
BONADOXIN doesn't "stop" the patient. It is free of side effects commonly associated with overpotent antinauseants. Goldsmith, reporting on 620 controlled cases, states that "toxicity and intolerance [are] zero."[2]

BONADOXIN DOESN'T STOP THE PATIENT!

Now available in tablet or drop form.

Dosage: usually one tablet or one tsp. (5 cc.) at bedtime. Severe cases may require another dose on arising.

Supplied: tiny pink-and-blue tablets, bottles of 25 and 100. Bonadoxin Drops in 30 cc. dropper bottles.

Each tiny pink-and-blue Bonadoxin tablet contains:
Meclizine HCl (25 mg.)
...for symptomatic relief
Pyridoxine HCl (50 mg.)
...for metabolic action and prompt antinauseant effect.

Infant colic?
Non-narcotic Bonadoxin Drops stop colic in about 85% of cases.
Each cc. contains:
Meclizine Dihydrochloride...8.33 mg.
Pyridoxine Hydrochloride...16.67 mg.

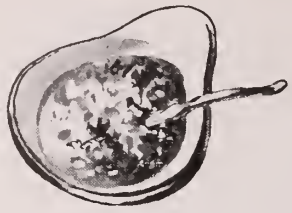
Dosage:

under 6 months	0.5 cc.	2 or 3 times daily, on the tongue, in fruit juice or water
6 months to 2 years	1.5 to 2 cc.	
2 to 6 years	3 cc.	
adults and children over 6 years	1 teaspoon (5 cc.)	

Supplied:
fruit-flavored, clear green syrup in 30 cc. dropper bottles.

References: 1. Drugs of Choice 1958-1959, St. Louis, C. V. Mosby Company, 1958, p. 347.
2. Goldsmith, J. W.: Minnesota Med. *40*:99 (Feb.) 1957.

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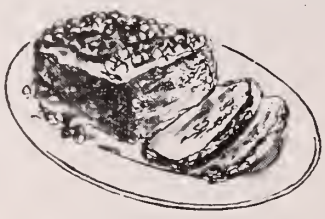
Tomato Sauce



Herbs and Spices



Chicken



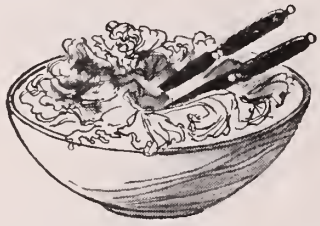
Meat Loaf



Hamburgers



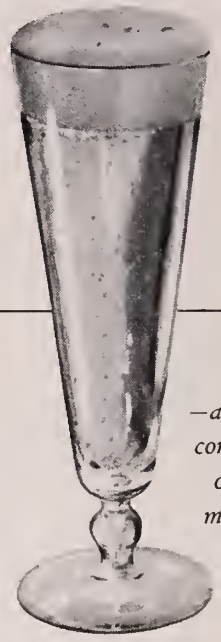
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Green Salads



Angel Cake



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—and with your consent, a glass of beer for a morale-booster

The Low-Fat Low-Cholesterol Diet

● Cranberry and tomato sauce pinch-hit for gravy. Herbs and spices lend a fine aroma to meats and vegetables. Chicken can be basted with lemon or orange juice. Meat loaf may sport a gay cap of whole-cranberry sauce while "surprise" hamburgers can hide a slice of pickle or onion sealed between two thin patties. And kabobs can add something different.

On green salads, cottage cheese thinned with lemon juice makes the dressing. For dessert, angel cake goes nicely under fruits—skim milk powder makes the "whipped cream."

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*Fat—0; Calories 104/8 oz. glass (Average of American Beers)

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Beer—America's Beverage of Moderation

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in relieving anxiety, tension

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perphenazine

an "agent of choice in treating tension and anxiety"[1]

- effective without somnolence
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For complete details on TRILAFON consult Schering literature.

(1) Marangoni, B. A.: Am. Pract. & Digest Treat. *8*:1959, 1957.

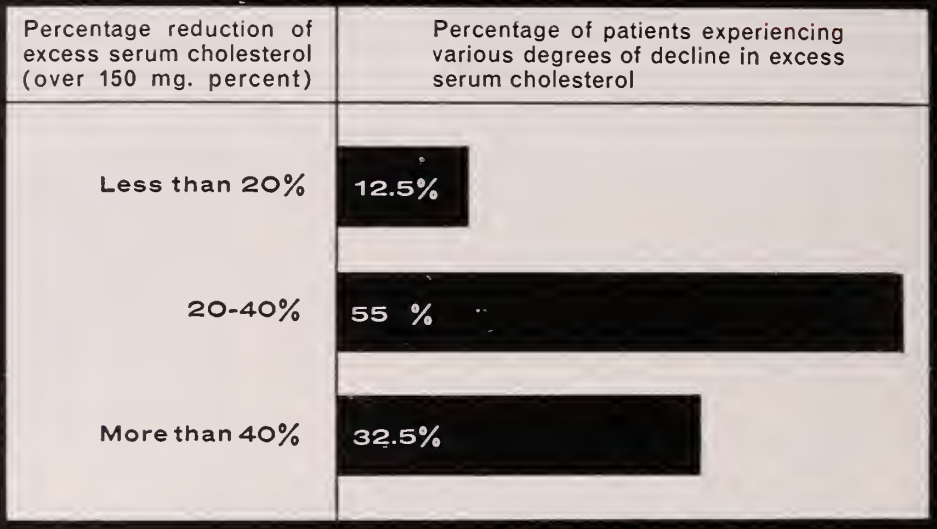
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'Cytellin' provides the most rational and practical therapy available. Without any dietary adjustments, it lowers elevated serum cholesterol concentrations in most patients.

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In addition to lowering hypercholesteremia, 'Cytellin' has been reported to effect reductions in C P ratio, S_f10-100 and S_f12-400 lipoproteins, "atherogenic index," beta lipoproteins, and total lipids.

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*'Cytellin' (Sitosterols, Lilly)

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The Virginia
MEDICAL
MONTHLY

October, 1958
Vol. 85, No. 10
Whole No. 1277

Guest Editorial . . . .

The Middle East And Our Medical Heritage

THE TURN of political fortune now focuses our attention upon the Middle East, land of enchantment, land of the Arabian Nights. From the shores of Phoenicia, now the Lebanon, came the greatest discovery ever made by the mind of man, namely: that the human voice is capable of twenty-eight sounds and these sounds can be represented by written symbols. Thus was born the alphabet, the first two letters of the word being the Greek letters, alpha and beta, derived from the original Phoenician aleph and bay. Middle Eastern culture has deeply influenced Western civilization. Street lamps, windowpanes, fireworks, stringed instruments, cultivated fruits, perfumes, and spices are among their contributions to our society. *Alcohol, cotton, sugar,* sofa, retain their original Arabic names. That often changed and often washed undergarment, the *chemise,* is an Arabic word surviving through the centuries.

The Middle East has long been known as the "Fertile Crescent" because its arable land arches over the Arabian desert. The Biblical writers called it "a land flowing with milk and honey". Since the beginning of time it has been the world's great battleground. Over it the Pharaoh Ramases II of Egypt laid low the mighty Hittites.. The Babylonians came with their armored chariots and dispersed the Jews into captivity, the Persian Empire under Darius saw its day of glory and crumbled under the heel of Alexander as he marched his troops along the selfsame coast where our Marines recently landed. This land torn by strife for thousands of years at last came under the unifying influence of a new religion, Islam. The Prophet Mohammed, in 622 A.D. armed with the "Holy Koran", set out to consolidate the disparate nations of the Middle East. So great was his zeal and that of his followers that within a century the entire known world along the Eastern end of the Mediterranean answered to the muezzins' call from the minarets. A few years more and North Africa fell to the Moslems. In their ardor they hurdled the Gates of Hercules to conquer the mighty bastion at the tip end of Southern Europe to which they gave the Arabic name *Gibralter,* —Jebal, meaning mountain and Taric, the Arabic general who made the conquest.

While Western Europe slumbered through the Dark Ages following the Fall of the Roman Empire, the Arab conquerors seized upon the Greek and Roman cultures which they found in Europe. Among these were the Hippocratic and Galenian teachings in medicine, something quite new to them. Before Islam, Eastern methods of healing were those of most primitive people: prayers and sacrifices to demons who brought disease

and affliction upon man. To placate them with amulets and strange ritual was the medicine of the day. Quick to grasp the medical compendium of Galen, to recognize the elemental truths of Hippocratic clinical observation, the Arabs studied them avidly and there soon emerged some of the great physicians of all time. Taking Galen and Hippocrates as their mentors, they erected a structure of clinical medicine based on accurate diagnosis and polypharmacy for which the inherent chemical genius of the Arab was so well prepared. The Arabic language quickly became the vehicle for fresh and original work in science and medicine. The Arabs were the first to license the pharmacist and physician for practice. Over 860 pharmacists were registered in Baghdad in 931 A.D. The first hospital was established there by Harun er Raschid and soon other hospitals to the number of 34 grew up throughout the Moslem world. Some were equipped with medical libraries and offered courses in medicine.

There were noted physicians among them. Rhazes, (Al-Razi), who lived during the early part of the Tenth Century was one of the keenest and most original thinkers of all physicians. He has been compared to Hippocrates and Sydenham. In selecting a new site for a great hospital in Baghdad he is said to have hung up shreds of meat in different places choosing the spot where they showed the least sign of putrefaction. His most important work was *Al-Hawi,* a comprehensive book first translated into Latin in 1279. He first distinguished between measles and smallpox. Suffering blindness from cataract in his old age he called in the most learned surgeon of his day. After quizzing him on the anatomy of the eye Rhazes thought it wise to forego the operation.

The most illustrious name in Arabic medical annals after Rhazes is Avicenna (Ibn Sina). His encyclopedic treatise, translated as the *Canon,* became preeminent in all the medical schools of Christian Europe. It was the major text at Padua, Sorrento, Paris, and Cordova. Indeed up until 200 years ago the *Canon* of Avicenna was in general use throughout Western Europe.

The Father of Chemistry was the great Jebir (Jabir Ibn-Hayyn). He described accurately the chemical reactions of calcination and reduction. He improved upon the methods of evaporation, melting, and crystallization. He knew how to prepare crude sulphuric and nitric acids. In general, he preserved the Aristotelian theories and put them into practice thus preparing for the era of modern chemistry which dawned in the Eighteenth Century.

The golden era of Arabic medicine has not been lost on the modern age. The great tradition has been maintained by the American University of Beirut, a School of Medicine chartered there under the Board of Regents of the State of New York and serving the Arab world for almost a century. It is the oasis of scientific medicine in the Middle East and has continually provided students of the Arab countries a medical education comparable to the best in Western Europe and America. In like manner the French Faculty continues to meet the highest standards in medical education thus making Beirut the medical center of the Middle East. And so our Western civilization, having inherited its medical knowledge from the Arabs, who embellished and enriched the the teachings of Greece and Rome, now in turn offers it back to them at its modern best.

William Bickers, M.D.

Problems Confronting Medicine Today

FRANK B. BERRY, M.D.
Washington, D.C.

I DEEPLY APPRECIATE the honor you have extended to me by your invitation to deliver the J. Shelton Horsley Memorial Lecture of 1958. It was my privilege to have known Dr. Horsley prior to World War II in the American Surgical Association. Throughout my medical school years and thereafter until his untimely death, I was always cognizant of his position as a leader of surgery in America and I looked forward to reading his many fine contributions to our surgical literature. During World War II he gave of himself unstintingly without thought of self or time; and throughout those years he must have had great satisfaction in the realization of the fine contributions his son Guy and his fellow workers were making in the Unit of the Medical College of Virginia. It was my good fortune as a member of the Ninth Evacuation Hospital, from Roosevelt Hospital, New York City, to find ourselves situated only a short distance from the 45th General during the winter of 1944 in Naples, and we soon found that we had great community of interests. My own intimate friendship with Guy grew out of a consultation with him as to the surgical care of Dr. Philip Giddings, one of Dr. Edward D. Churchill's former residents and at that time a member of one of the Surgical Teams of the Second Auxiliary Surgical Group.

SUBSTANCE

Inasmuch as I have been out of clinical medicine for over four years, I have chosen a topic dealing with some of the general problems that confront Medicine today and with which you will have to deal in your generation. We of any given generation must always live the present and try to shape the future as we would like it to be. We are not entirely free to do this, however, because in living the present we must always reckon with the heritage of the past. Hence, the more cognizant we are of the past and its problems, the more intelligently will we act in the present so as to construct a future which we would like to leave for those who follow.

BERRY, FRANK B., *Assistant Secretary of Defense, Health and Medical.*

J. Shelton Horsley Memorial Lecture, delivered before the Richmond Academy of Medicine, April 22, 1958.

These are broad platitudes, so let us consider specifically a few of the perplexing problems which confront us today, some of which have their roots deep in the past.

First, during World War II a total of 62,484 Doctors of Medicine (40 per cent) were commissioned in the armed services at different times. The maximum number on duty at any one time in the Army, for example, was 46,314, with about 2700 of these on duty in Veterans Hospitals. With these thousands of physicians and surgeons removed from civilian practice during those years, with our internships cut to nine months and residency training at a low ebb, how did it happen that the health of our population remained extraordinarily good?

Second, in the thirteen years since the war the medical profession has been unsettled, both within itself and in the eyes of the public. Our internships are now of one year's duration, and the number of available positions has grown moderately. The opportunities for residency training, however, have grown by leaps and bounds. We now have approximately 11,000 positions for interns and 26,000 residencies offered throughout the country;[1]* and during this same period we have had a conflict in Korea with another drain upon the medical profession for the Armed Forces.

Third, during the same period of time, our profession has received a considerable influx of alien physicians and also native born citizens who have graduated from foreign medical schools, to say nothing of a large number of foreigners from eighty or more countries who come to this country for postgraduate training.[1]

Fourth, there is the disturbing fact that probably only about half of our medical graduates seek more than a one year internship before entering practice, whereas prior to World War II internships of 18 to 24 months were the rule.[2]

Fifth, only 29 of our states require an internship before licensure to practice medicine.[3] Also, there is wide divergence in state and city requirements for licensure or special registration for interns and residents, amounting almost to complete confusion as one reads the various requirements.

*In 1957 the numbers were—Interns, 12,404; Residencies, 30,000.

Sixth, medicine has expanded its scope: submarine, aviation and space medicine; radiation and its hazards; and the extraordinarily rapid development in fuels, propellants and other industrial products.

Seventh, how is it, in this period of rapid change and perhaps lower standards of postgraduate training for a portion of our graduates that there has been major improvement in our health:[4]

1. Neonatal mortality of babies under one year is now only 26 per 1000 as compared with 72 per 1000 in 1925; and the maternal death rate for the same period has dropped from 65 per 10,000 births to slightly less than five.
2. During the last thirteen years our longevity for both sexes has increased, and, notwithstanding a comparative dearth of specialists in preventive medicine and public health, our whole disease pattern is changing due to nationwide improvements in sanitation, in immunization and in the newer developments in antibiotics and chemistry, so that now, for example, we talk of malaria eradication whereas just for the year 1943 in World War II the Navy reported almost two million man-days lost because of that disease alone.
3. We have witnessed the closing or change of many of the tuberculosis sanatoria, with the death rate for this disease 8 per 100,000 in 1956, as opposed to 130 per 100,000 in 1927, although the incidence remains about the same.

Can we say that these major improvements in health and longevity have occurred just because of our newer antibiotics or antimalarials, tranquilizers and sedatives, increased attention to psychosomatic medicine with the attendant increase in psychologists and psychiatrists, and to some extent to advances in anaesthesia and surgery?

Eighth, what position shall we take regarding the so-called "third party" or corporate medicine?

Ninth, what position does medical research occupy today not only in the world of medical education, but in our whole national economy?

To take up these questions one by one—*first*, the good health of our population during World War II. Compare the disease pattern prevalent in the United States at the onset of World War II with that of World War I. In 1917 there was still a large rural population in the United States, no travel by aircraft, and our road improvement program and network of fine highways that is now growing so rapidly had scarcely begun. We were a home-loving people and not as travel-minded as we were to become in the ensuing years. The result was that in many of the rural areas, particularly in the south, west and mountain states, large segments of the population had not been exposed to some of the more common diseases of childhood, particularly measles and pertussis. As the Draft went into effect with large military concentrations of recruits, there was a fertile field for the spread of these diseases, particularly measles; with its common complication of pneumonia. The prevailing bacteriology of this period was a beta hemolytic streptococcus. We knew nothing about gamma globulin immunization; the sulfonamides had not been investigated as to their therapeutic possibilities; the antibiotics were unknown. Therefore pneumonia with syn- and post-pneumonic empyema took its toll.

During the winter of 1918, I was an intern at the Peter Bent Brigham Hospital and one entire male ward was turned over to the Navy as an overflow for the Chelsea Naval Hospital. Here we saw a full blossoming of acute infectious diseases in the young; an occasional case of diphtheria, much rheumatic fever, influenza, pneumonia, streptococcus throat, acute tonsillitis, malaria and parasitic infestation, a case or two of encephalitis and one or two of epidemic meningococcic meningitis.

On duty in the Army in April 1918, my earliest field assignment was at Fort Riley, Kansas, one of the areas where measles had been most prevalent. I remember a two-story building entirely filled with patients with post-pneumonic hemolytic streptococcus empyema. In its early stages the rapidly accumulating fluid in the chest was really synpneumonic, thin and purulent, and when smeared resembled a pure culture of the streptococcus. Prompt operation was the rule initially and there was high mortality; although in some places early treatment by repeated aspirations or closed drainage in the early stages was recognized as the correct initial therapy. Asymptomatic carriers of hemolytic streptococcus were numerous. In addition, in some of the camps in the same year there was a high incidence of meningococcic meningitis and again it was noted that there were many carriers of the meningococcus in the posterior nares and throat with resultant rapid spread of the infection.

When the pandemic of influenza came in the fall of that year, there was a fertile soil for the complication of highly virulent pneumonia and empyema. This was the underlying medical picture presented in World War I: a pandemic of influenza super-

imposed on a population that had just been through a widespread incidence of measles, pneumonia and meningococcic meningitis; no specifics against pneumonia or meningococcus meningitis except limited type sera; no antimalarials other than quinine; no insulin; no vitamins; no sulfonamides or antibiotics; no immunization against tetanus and typhus; and tuberculosis just emerging from the custodial type of sanatorium care to an active therapy such as pneumothorax and surgery, which were to be generally adopted a few years later.

In World War II, 1941 found us with the sulfonamides and newer antimalarials already available for treatment, and penicillin increasingly available after the spring of 1943. Perhaps most important of all there had been wide advances in the whole field of immunology in the years between the wars so that not only did we have protection against smallpox and typhoid, but in addition preventive inoculation was now available against tetanus, diphtheria, typhus, cholera, yellow fever; and we had gamma globulin which sometimes prevented and at least minimized attacks of measles. In addition to the newer antimicrobials, human plasma was fully available and as the war progressed, there was increasing use of whole blood. Initial strides were made in the development of central blood banks by Colonel Edward D. Churchill, Surgical Consultant in the Mediterranean Theatre, where over 80,000 transfusions were given with low titre "O" blood no older than eight days. All of it was drawn from the supporting service groups in the Naples area, and there were no recorded cases of infection or serious reactions. This set the pattern for the further wide extension of its employment in the Pacific and European Theatres.

Psychically there is the emotional drive that any war brings to the population as a whole and the compensatory substitution at home of concern for and identification of themselves as civilians with the Armed Forces through letters, Red Cross, United Services and similar organizations. This gave them a sense of duty and a determination to keep well.

Man is an animal and in the total history of mankind not too far removed from his prototypes. In an essay, *The Moral Equivalent of War,* written in 1910, William James[5] writes:

> "The earlier men were hunting men, and to hunt a neighboring tribe, kill the males, loot the village and possess the females, was the most profitable as well as the most exciting, way of living. . . . "But modern man inherits all the innate pugnacity and all the love and glory of his ancestors. Showing war as a rationality and horror is of no effect upon him. But the horrors make the fascination. War is the strong life; it is the life in extremist, war taxes are the only ones men never hesitate to pay, as the budget of all nations show us.
>
> "History is a bath of blood."

Justification for war is ever common: the "Gott mit uns" phrase of the Kaiser's armies in World War I; and "Fighting to make the world safe for Democracy", the Allies' slogan; "Live dangerously and "the Master Race", were the common phrases of Mussolini and Hitler in World War II; and the Four Freedoms, Hitlerism and "Day of Infamy", our rallying cries. We can even go back to Washington's phrase "If we desire peace, it must be known we are at all times ready for war";[6] and our present slogans for National security. All of these phrases and the various drives behind them create an emotional dynamism and unquestionably this drive contributed greatly to the absorption of so many doctors into the armed services in World War II, and simultaneously to the continuing good health on the part of the civilian population.

My *second* and *third* questions: the problem of our great increase in residencies, and the influx of alien physicians and of our native born citizens who return after completing their medical education in foreign medical schools. Our whole medical population has increased fairly rapidly over the past ten years, and this year our medical schools will graduate about 1500 more students than in 1950, and there is the additional influx from foreign schools. Over 900 of the latter were granted licensure in this country last year, equivalent to the classes of ten average sized medical schools. It is estimated also that we have about 1700 of our citizens studying in foreign medical schools, an equivalent of approximately four medical schools.[3]

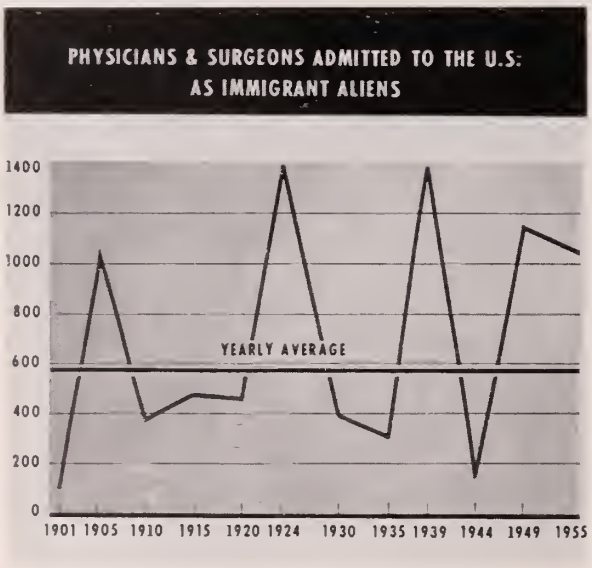
As you see from the chart the influx of alien physicians has run an interesting pattern with marked peaks in 1905, after World War I, in 1939 and again after World War II. These may be explained: the first, 1905, was a peak period in our immigration; the second peak is post-World War I; the third was due to the expulsion of the Jewish groups by Hitler from Germany, Czechoslovakia and Austria; and the fourth denotes postwar immigration to this country.

Following World War II in order to accommodate those young men returning from war and seeking

education and specialty training, our hospitals with sympathetic assistance from municipalities and Boards of Trustees greatly expanded their residences out of all proportion to the internships. Now with 11,000 internship and 26,000 residency positions open each year, even with the foreign applications, it is, nevertheless, impossible to fill all of these positions with well trained individuals.

For example in the year 1955-56, with a total of 8,780 available spaces almost 2300 alien physicians were serving in approved internships; and during the same period with over 21,000 approved residencies, almost 5600 were filled by alien physicians.[3] The group of alien interns and residents has constantly increased since 1950 and since World War II there has been a growing demand for licensure by immigrants from over 80 countries. To assist in the solution of this difficult problem the Educational Council for Foreign Medical Graduates was recently formed by representative groups in this country.

It is the natural desire of all to assist these alien physicians and foreign graduates. Medicine in the United States has much to offer the foreign graduate. We have become the postgraduate center much as was Europe in former years and wish to encourage postgraduate study in our better medical schools, and through internships and residencies in our better



hospitals. We must be ever on guard, however, not to proselyte these young men. We should like to encourage the best of our foreign friends to study in this country and hope that when they return home they will share the benefits they have received. On their part it is essential that they be good students with high moral and ethical values and able to understand, speak and write English. This last is important as otherwise many misunderstandings will arise and they may return home dissatisfied, and on our part, we may resent and not understand them. Yet there is no better way to encourage and spread friendship than for us to extend a cordial welcome to this selected group. As I have traveled in the Near East and Far East and in my former position on the Columbia Surgical Division at Bellevue Hospital, this has been constantly impressed upon me. We must be judicious in our selection, then having selected, we must be courteous, friendly and encouraging. The supply of our own medical graduates cannot possibly meet the demand for the interns and resident positions available. There is, therefore, a mutual need between us and our foreign friends and postgraduate students. To cite a few instances of what our influence can be, the former Minister of Health, Professor of Gynecology at the Medical School in Tehran, is a graduate of the Medical School at Syracuse; the Professor of Malariology at Tehran is a graduate of Johns Hopkins School of Public Health; and at present there are several young men from Iran, graduates of our medical schools now serving in internship and residency positions in our hospitals, who plan to return to Iran and eventually take positions on the faculties of the medical schools. Also in Tehran there is a growing Iranian-American Medical Society. In Ankara, the Professor of Pediatrics had his postgraduate work in the Children's Hospital of Harvard Medical School, and all of you know of the American University in Beirut with its fine medical school.

But like most temporary programs, even after postwar pressures were relieved, the number of positions continued to expand. The cost of living and hospital expenses have skyrocketed since the war so that now even semi-private accommodations in many of our larger hospitals are over $20.00 a day, and yet all hospitals operate at deficits. Unquestionably the large increase in residency staffs with necessary ever rising salary scales adds appreciably to these costs, not to mention the increasing number of our larger hospitals which are adopting a fulltime system. Salaries run from $20,000 to $35,000 to the chiefs of major services with usually one or more younger assistants at approximately $10,000 or $12,000 each year. The result has been an enormous addition to the budgets of all hospitals because, as you are well aware, many of these house officers are married and have families and they must live. What

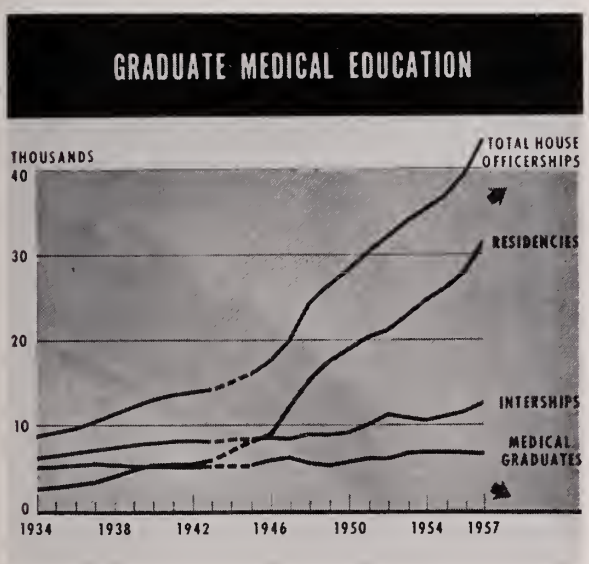
proportion of these costs should be assumed by the University, passed on to the patients, assumed by the public?

Fourth, what proportion of our own medical graduates desire added residency training? On 2000 questionnaires furnished by the American Medical Association to the young men leaving the Armed Forces, the following questions were asked:

1. "When you entered the armed services did you plan to take more than your one year internship?

2. "On now leaving the Armed Forces do you plan to take more than your one year internship?

The question was "No" in over 60 per cent of the replies.[2] On the other hand from the questionnaires we have sent out from our office annually to the graduating classes of medical schools, the figures are somewhat different: approximately 50 per cent plan to return to hospitals for further training after their military service is completed. In any event it seems that approximately 50 per cent of the graduates from our medical schools, to say nothing of



those who enter this country each year, plan on some form of general practice rather than a specialty; this of course decreases the number of available applicants for residencies still further. There must be an eventual solution to this problem and you who are young in the profession will have to help solve it.

We pride ourselves that with our extended residency systems we offer a high degree of postgraduate education, this period of training sometimes running for seven to nine years. Are we perhaps overdoing this? It has been said that there are now over fifty specialties and subspecialties available for postgraduate training—alarming fragmentation! In fact this division into small compartments is now approaching the point where some wish to be entirely removed from the mother trees of medicine and surgery. Is it not time perhaps to consider the return, as the late Harvey Cushing used to say, "to suckle at the main stem again"? Throughout the centuries we have struggled between generalization and specialization.

In the days of Hippocrates and Galen, medicine and surgery were one. During the age of Scholasticism in the Middle Ages, surgery was forced to become a separate specialty. This dichotomy occurred when the Council of Tours in 1163 decreed that "Ecclesia abhorret a sanguine." This was an interdiction on the part of the Church against the drawing of blood and it immediately downgraded surgery, although a few physicians after their courses in medical school were completed continued to hold to the original tenets of their profession and considered surgery as an honorable part of it. The inevitable result of this Edict was the establishment of the Barber group, and a secondary lay group or Surgeons of the Short Robe. Medicine has struggled with this division ever since, and only in recent years have medicine and surgery been re-united to a certain extent only now to fly apart again into increasing fragmentation.

Dr. Allen O. Whipple recites the story of the young Princeton freshman who came to him about the study of medicine. He said he was not interested in medical school or in ailments of the body, only in those of the mind and asked why was it necessary to go to medical school when all he was going to treat was the mind in its normality, abnormalities and aberrations.[7] In our office we frequently receive letters from interns saying that they intend to go directly into allergy, cardiology, arthritis, or some other of the sub-specialties. Today in some schools over 80 per cent of instructors in the basic sciences are Ph.D's. rather than M.D.'s.

Fifth, as to Licensure and Specialty Boards: This has been a constant struggle swaying first one way and then another. Roger of Sicily in 1140 forbade anyone to practice medicine who had not passed the necessary examinations. At that time the School of Salerno, the first of the European Schools of Medicine, had already been in existence for about 100 years with divisions in medicine, surgery and diseases of women, and a woman first recorded as a member of the faculty of a school of medicine. In 1224 Frederick the Second of Sicily extended the regulations and specified that the medical faculty

of the University of Salerno should conduct these tests. At that time the prescribed course of training was philosophy for three years, medicine for five years, and practice under a qualified physician for one year.[8]

In 1311 Philip the Fair of France antedated the American Board of Surgery by somewhat over 600 years through an edict establishing a Board of Surgical Examiners for those who wished to practice surgery. Master Jean Pitard, probably a graduate of Bologna and one of the few surgeons of the Long Robe, was the chairman of the Board. At that time there was (1) the small group of well educated surgeons, (2) the surgeons of the Short Robe, and (3) the barbers. The first edict prescribing rules for the barber surgeons was issued in 1301,[9] but they did not reach their apogee until the 15th and 16th centuries. In England various rules and agreements were made for and by the divisive groups until in 1540 Henry VIII, by charter, united the educated surgeons and the barbers.

In our own country the American Medical Association was founded in 1847, as an organization to improve the quality of medicine throughout the various states. In 1869, President Eliot of Harvard, in his First Annual Report, signified in forceful manner the interest of the university in its medical school. At first he encountered great opposition by senior members of the faculty, all honorable men but with limited vision. As a result of the Flexner Report in 1910, many of the so-called diploma mills were abolished and medicine was placed on a firm and ever improving basis. But again there was slippage so that the American Colleges of Surgeons and of Physicians arose to control their own special branches, followed by Specialty Boards with constant improvement in the quality of American medicine.

You in Virginia at one time or another have taken prominent part in the argument of State's Rights *versus* Federalism. Unquestionably as regards medicine, it would be far better if one licensure were sufficient for all. It would appear that increased efforts by the American Medical Association, through its Council on Medical Education and Hospitals, is the best method of approach to a solution of this question. Another path is through the Council of State Governments. By such means eventually all of the states may accept examination by the National Board of Medical Examiners. Such a voluntary method is far better than any law which requires enforcement and furthermore such solution will meet with better acceptance, and should result in a much better integration of our whole system of licensure and equalization of various state and municipal rules for temporary certificates to practice during periods of residency. Is it multi-system of licensure which permits practice of any medical specialty by a physician with either no internship or only a one year internship satisfactory to you? Do you think it adequately protects the public? In Great Britain, there is a much sharper distinction between the practice of medicine and surgery.

In recent years a belief has been steadily growing that more attention should be given to the treatment of the patient as a whole, a resurgence of the Art along with the Science, an evident indication of a return to "suckle at the main stem." Yet some of our Specialty Boards have gone so far in their demands as to approach the old Guild system, not too far removed today from a type of labor union. Pearse has remarked, "To be certified by a Board is quite similar to carrying a union card."[10] Does this mean that the Boards will insist upon an increasingly strict and narrow concept of their specialties, having already attained their original and praiseworthy objectives? I hope not. But the American Board of Obstetrics and Gynecology for example now demands before certification that anyone holding certification by the American Board of Surgery must resign that certification.[11] Let me ask, how can a man who has been certified as a qualified abdominal surgeon after reasonably tough examination suddenly deny his proficiency when everyone knows he is still qualified?

Further indications of rapprochements may be the recognition of the whole under the name of psychosomatic medicine, which brings psychiatry back into the medical field. Unless this is done we shall be in trouble, as witness an experience in a hospital in World War II when a psychiatrist in his enthusiasm for the newly recognized effects of some of the barbiturates put patients with battle fatigue to sleep without taking temperatures to ascertain whether or not the real trouble may have been malaria or other somatic disease, which proved to have been the case in several instances. Or, the case report years ago by a friend of mine in New York of an instance of hysteria with persistent low grade temperature: this patient had been carefully observed in one of the leading hospitals in this country over a period of months; but just after this case report had been published the temperature and symptoms immediately subsided after an unsuspected abscess was drained!

Another evidence of dissatisfaction with overspecialization has been the resurgence of general practice, now with its active Academy of General Practice, which itself approaches specialization and return to the Guild concept. Cope[12] suggests that possibly some of the blame rests in the medical schools themselves in that they have not clearly defined the aims of medical education to meet the increasing demands placed upon it by our changes in society and many new developments in our whole civilization, to say nothing of the new discoveries within the field of medicine itself. Therefore we should define our aims carefully and condense and integrate more fully our education in medical schools and early postgraduate years within our hospitals.

Sixth, since World II completely new fields of medicine specifically dealing with aviation and submarine medicine, atomic medicine with radiation hazards, and now with space medicine, have opened. During the last few days there has been an extraordinarily rapid development in newer and more exotic fuels, propellants and other industrial products. These branches of Industrial Medicine affect all of us more than we realize: the use of high concentration of DDT, chlordane, dieldrin, and other newer insecticides and pesticides, for example, which may vitally disturb the balance of nature and in addition to destroying pests, destroy also bird and fish life. As still stronger pesticides are used for the rodent population, the dangers increase. These new and powerful toxicological agents bring new diseases with varied symptomatology. This may require closer association with our veterinary brethren and further study in their fields of poisons and diseases common both to man and beast. Much work is being done on protection against radiation and its treatment, which in case of an all-out attack in any future war would be of critical importance to us, in the saving of lives and in our ability to recover quickly as a nation. And, finally, we have the real challenge of Space Medicine, which means the ability of man to survive, the necessary food which he will require, his protection from hazards that are still unknown and also the disposal of his wastes.

Seventh, what has happened to us in this recent period of rapid change and unsettlement in our medical world? Only through change does real progress emerge. There has been an amazing drop in maternal and neonatal mortality, increased longevity, control and possible eradication of some of the worldwide scourges and disease. Probably the chief factors in our increased longevity have been the advances in preventive medicine and immunology and an increasing supply of specific antimicrobials. With the marked decrease in infectious diseases these measures have brought about, many more people will live to the age of 40 than formerly. Beginning with age 40, however, the years added to the life span have been relatively few. In former years infections stood high on our list of causes of death. Now the three leading causes are cardiovascular disease, cancer and accidents. The first two might be considered as degenerative processes of middle and late life, and the third due to our increasing pace in civilization subsequent to the development of the internal combusion engine, with the jet now superimposed, and the vista of atomic power just ahead.

Are these changes all true progress? How are we going to help protect our fellow man from death by accident? How are we going to increase his active potential as he moves beyond the age of 65? Our laws are increasingly sympathetic to those past that age and offer every encouragement for let-down in their work. Yet management and labor both tend to cast out those beyond the age of 60 or 65 and after the age of 70 many of the commercial insurance companies automatically drop their health and accident policies; many annuity policies must go into effect at age of 70. Every discouragement to work and produce is offered and it takes strong determination to resist that temptation even when physically and mentally vigorous.

As to protection against accident, the National Council of Safety, the American Association for Surgery of Trauma and the Trauma Committee of the American College of Surgeons are all concerned and work in close cooperation. Some of our universities and medical schools offer postgraduate courses in accident prevention. In our Air Force, human factors teams are always associated with the engineers and designers of the planes to assist in developing safety measures for the crews with realization of the limits of the human body. The Aero Medical Association is concerned with this problem and the Joint Committee on Aviation Pathology of Great Britain, Canada and the United States has been organized to assist in the investigation of aircraft accidents as to possible causes. The effects of all of these interests are likewise increasingly evident in various safety factors incorporated into automobile designs, although as yet the automobile designers have not taken as active an interest as have the aircraft groups.

My *eighth* question has to do with the position of the third party interest and corporate medicine. This problem is perhaps best stated in the Principles of Medical Ethics of the American Medical Association, December 1954, Chapter 7, Section 4, Free Choice of Physician:

"Free choice of physician is defined as that degree of freedom in choosing a physician which can be exercised under usual conditions of employment between patients and physicians. The interjection of a third party who has a valid interest, or who intervenes between the physician and the patient does not *per se* cause a contract to be unethical. A third party has a valid interest when, by law or volition, the third party assumes legal responsibility and provides for the cost of medical care and indemnity for occupational disability."[13]

In the Principles of Ethics adopted by the House of Delegates of the AMA in June 1957, this section does not appear. Instead attention is directed to Sections 6 and 7, particularly the former:

"A physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgment and skill or tend to cause a deterioration of the quality of medical care."[14]

This problem today is one of frequent altercation between organized medicine on the one hand, and on the other, industry, labor unions, insurance groups and hospitals with their fulltime radiologists, anesthesiologists and laboratory personnel, and even the fulltime system itself in the clinical sections. A case in point at the moment is the dispute between the United Mine Workers Health and Welfare Fund and Organized Medicine. This Fund has been under the direction and administration of Dr. Warren F. Draper for the past ten years, who has had a completely free hand with its medical program. It began as a fee-for-service and free-choice plan.[15,16]

What happened? Dr. Draper noted that there was an unduly high hospital admission rate, considerably above the average over the country and the Blue Cross figures, and there appeared to be considerable unnecessary surgery. He then ruled that hospitalization would be accepted only after a consultant had been requested by the family doctor. Both admission rates and surgery dropped as much as 50 per cent in some areas. This created a storm of protest on the part of the local physicians, which soon reached the county and state organizations. An agreement was finally developed with the Pennsylvania State Medical Society whereby the Society agreed to set up committees to review doctors' qualifications to cooperate with the Fund in this manner. This agreement lasted less than a year when it was abrogated by the Society. More recently surgery in the Mine Workers' Hospitals has been limited to those certified by one of the Surgical Boards or Fellows of the American College of Surgeons. Again a storm of protest has been raised chiefly on the part of organized medicine, although many doctors have been cooperating with and working for the Fund without any difficulties. Furthermore the Fund has engaged a certain number of fulltime Doctors of Medicine for clinical positions in the hospitals. Organized medicine has retaliated in some of the areas by refusing admission of these fulltime employees into their County or State Medical Societies and local Credentials Committees of the American College of Surgeons have refused to recommend some of the surgeons for membership in the College. In the January 1958 number of the Pennsylvania Medical Journal,[17] Dr. W. Benson Harer discusses this disagreement from the standpoint of the Pennsylvania Society. It seems likely that eventually both groups will reach a definite agreement. In fact, this will have to be the case whenever this problem is presented.

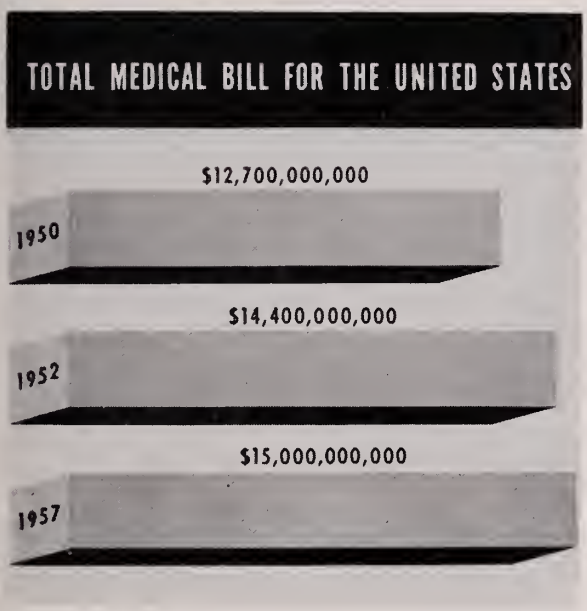
Is not the basic question as simple as this? If you or I employ a person to work for us and he falls ill or has an accident, quite apart from any responsibility we may have, we may out of our own kindness tell that employee to go to our own doctor or to some other doctor and the bills will be paid by us, provided that we know something about the doctor. I am sure, however, that not one of us, as employer, would give his personal employee carte blanche to select anybody he might wish, such as a faith healer, naturopath or chiropractor, let us say, or a physician with questionable ethics or morals. It seems to me this is basic. In olden days in our rural or even urban areas, if a person lost his house or barn by fire, the neighbors would rally around, take up a collection and help him build a new house. As our civilization becomes more complicated we lose not only these individual relationships but the philosophy behind them so that in order to afford adequate protection and enable an individual to recover from such catastrophe, various insurance and company welfare plans are developed, perhaps beginning with fire insurance; hence the impersonal "third party".

When medical insurance plans first came under discussion a quarter of a century or more ago, there

was considerable opposition on the part of organized medicine because of fear of limitation of free choice and of the "third party". And yet today the medical profession takes pride in the fact that about 123 million of our people now participate in some form of hospital insurance.

As an example of the extraordinary development of insurance and welfare plans, I cite the following comparisons. In 1952, 92 million of our population were covered by hospital insurance and in 1957, 123 million. Comparable figures for surgical expenses are 73 million and 109 million, and for medical expenses 36 million and 74 million. In a similar manner our welfare rolls are constantly growing as are our monthly payments under the Old Age Survivors Insurance: in December 1952 there were approximately five million Old Age and Survivors Insurance beneficiaries; in December 1957, 11 million; in December 1952 payments under Old Age Survivors Insurance were 225 million dollars, and in December 1957, 605 million.[18]

In all of these plans the third party enters into the picture. In the development of these various



medical insurance and welfare plans, organized medicine wished to protect the *status quo* and assumed a following, rather than a leadership role.

The American Medical Association and its component State and County Societies, the American Colleges of Surgeons and Physicians and all the Specialty Boards were organized to improve medical education and the standards of medical practice. There have been six important steps taken to improve these standards:

1. The founding of the American Medical Association over a hundred years ago;

2. Integration of the university medical schools into the universities as integral parts of them, as opposed to a more or less proprietory operation of medical schools by their faculties up to that time;

3. The founding of the Johns Hopkins Medical School and the introduction of fulltime heads of departments and the growth of the resident system under Welch, Halsted, and Osler;

4. The establishment of the Council on Medical Education and Hospitals by the American Medical Association in the first decade of the Twentieth Century;

5. The Flexner Report on Medical Education in this country in 1910; and

6. The founding of the American College of Surgeons in 1913 and the American College of Physicians in 1915, together with the later development of the Specialty Boards.

Do we still believe in better standards of medical education and medicine, or are our ideals changing and does a commercial economy occupy an increasingly prominent place in medical ethics? Are we protecting mediocrity? With exceptions, throughout the years our medical schools have tended to withdraw from the arena and seclude themselves into "ivory towers". Organized medicine has therefore lost valuable and highly motivated leadership as the result of the continuing factions of "townies and gownies".

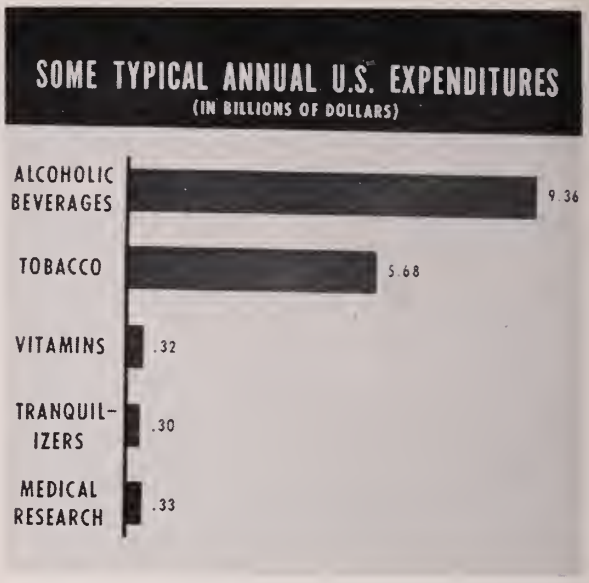
Nor is it medicine only that faces this issue today but also the dental branch of the healing arts. We are at a parting of the ways—one points toward true statesmanship; the second toward defense of the weaker elements and continued defense of procedures and methods that worked well 30 and 40 years ago but now need readjustments, or revitalization if you will, along with the changing picture of our general economy. In my opinion this second road, the vigorous defense of the "status quo ante", encourages the development of socialized medicine and dentistry in spite of its protagonists who themselves may fear the role of true statesmanship in our profession. Quite the contrary, if we wish to prevent such socialization, then we must all face the question squarely, exert leadership, and promote cooperation between our profession and local, State and Federal governments. If there is continued resistance with hesitancy to lead and develop plans, we shall surely be overwhelmed.

Ninth, medical research: What have we been doing in medical research over the years? In 1941 the Federal government contributed slightly over $40,000 to our medical schools for research. In 1952 the total Federal contribution to medical research was 36 million and this year about 186 million dollars.[19] Part of this money will be spent within the armed services, Veterans Administration, Public Health Service and other government agencies, but the great bulk will be allotted for research within our universities and hospitals. Added to this there will be approximately 124 million dollars of private funds appropriated, making a total of 330 million dollars. It is anticipated that in 1959 another 20 million dollars will be added.[19] This is approximately 2.2 per cent of our total bill for medical expenditure. Is this enough, or too much?



Money is not the only answer, as you well know. There must be qualified personnel to direct and participate in any research program. What is the relationship between research and teaching? Obviously if a good teacher is interested in and produces good research, we have the optimum combination. On the other hand there are productive teachers who have little primary interest in research. At the moment various research programs are under pressure from various supporting groups—the Cancer Society, the Heart Foundation, poliomyelitis funds, multiple sclerosis, crippled children, cerebral palsy groups. Should there not be better coordination?

No large sums of money are necessary for basic research: consider the fundamental work of Albert Einstein and Neils Bohr in the splitting of the atom.



Project or developmental research, however, as in the last instance, and from a medical standpoint in the development of our antibiotics, may require vast sums. Moreover due to the foresight of the late Secretary Forrestal, we have now the National Security Industrial Association. Pharmaceutical and other groups who are members of this Association invest substantially in development and testing. For example, there is the project of certain surgical instruments fabricated or plastic, and the determination as to whether some of our newer methods of whole blood preservation may be developed along practical commercial lines. Further exploration in these fields and proper appraisal of medical research and its position within the whole framework of medicine will be one of your problems.

Certainly a growth of approximately 340 per cent within five years in Federal funds for medical research should perhaps give us cause for serious thought.

EPILOGUE

Perhaps the best philosophy of the situation in which all in our country find themselves today, and which applies equally well to the healing professions, is best expressed in an article called "An Inward Look" by Robert Oppenheimer:[20]

> "There is a widespread impression that we live from astonishment to surprise, and from surprise to astonishment, never adequately forewarned or forearmed, and more often than not choosing between evils, when forethought and foreaction might have provided happier alternatives.
>
> "I think that the three weaknesses—in our education, in our faltering view of the future, and

in our difficulties in the formulation of policy—have some common grounds; but they are not the same. . . . Certainly egalitarianism and our traditionally cherished tolerance of diversity, diversity precisely on the most fundamental issues of man's nature and destiny, his salvation and faith, certainly these qualities, long held as virtues, have much to do with our troubles in education where they define, as it were, the insoluble problem; they have much to do with the difficulties of prophecy and policy, which traditionally rest on consensus precisely with regard to those matters where we are dedicated to difference. The good fortune of the country, speaking in large terms and over the centuries, and its consequent optimism and confidence, have something to do with our troubles."

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Tranquilizer in Childbirth

Still another use has been made of one of the tranquilizers: to relieve pain and to produce relaxation during childbirth.

The drug promazine was given intravenously to 10 women by Drs. Stanley P. Wegryn and Robert A. Marks, New Orleans. Also given to the women were a spinal anesthesia and merperidine, a pain-relieving drug.

Writing in the August 16 Journal of the American Medical Association, they said excellent results were achieved in 57 of the women and good results in 29. Promazine has a "marked relaxing effect" and helps prevent vomiting. It also seems to have some properties that help the patient to forget part or all of the labor. The drug should not be given to persons with asthma, since it produces brief nasal and throat congestion.

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Genetics and Public Health

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IT HAS BECOME TRITE to observe that in both the medicine and the public health of highly developed countries infectious and nutritional diseases have become less of a problem than previously, whereas chronic diseases, loosely termed "degenerative", in which genetic factors play a relatively prominent role, have become major considerations. It is the purpose here to scan briefly a few of the areas in which human genetics touches on the domain of those concerned with the public health.

The genetic effects of ionizing radiation deserves first consideration because of their far-reaching implications. The possibility of inducing an intolerable burden of harmful mutations from the military, commercial, and medical use of these potent agents is a real one. Protection of the public health requires knowledge of physics on the one hand and genetics on the other, just as bacteriology and epidemiology were disciplines basic to classical public health practice. The neoplastic effects of irradiation—leukemia is the clearest case in point—may be produced through a change in the genes of the parent cell type, so-called somatic mutation. Significantly, chest x-ray surveys for tuberculosis have been discontinued in some low risk populations because of the conclusion that the radiation risks outweigh the benefits which would be expected.

A concept foreign to the thinking of most of us, from experience with drugs, for example, is that there is no threshold dosage of radiation below which mutation is *not* induced. Any radiation is "bad". In the second place, it does not matter how small the individual doses of radiation may be or how widely they are spaced in time. The accumulated dosage of a reproductive lifetime is the quantity to be considered in evaluating the genetic effects. In connection with mutations which are inherited—mutation in the germinal cells which have their expression in future generations—it is irradiation of the gonads which is significant and, of course, exposure of the gonads after the reproductive period has no significance as far as affecting the population. In the induction of leukemia exposure of hematopoietic elements of bone marrow is what matters. This is the reason that the use of heavy x-ray therapy for Marie-Strumpell spondylitis has been accompanied by such an impressive incidence of leukemia in after years. Exposure of the fetus *in utero* not only carries the risk of producing congenital malformations if the irradiation is given in the sensitive early stages of embryonic development but germinal mutation may be induced in the fetal gonad. Therefore, irradiation of the grandmother may have an effect on a grandchild born many years later. X-ray pelvimetry, which in some obstetrical clinics was practiced in almost all cases, must be used with care. It is pointed out that in breech presentation of male fetuses the superficial location of the testes unprotected by either the legs of the infant or much thickness of maternal tissues must result in unusually heavy exposure during x-ray pelvimetry.

The mutagenic potentialities of certain drugs must also be kept in mind. The nitrogen mustards, for example, can be shown in experimental situations to have this capacity. Although the mutagenic properties of drugs have not represented a public health problem hitherto, in the future as potent agents against cancer and other disorders are developed, mutagenic effects may be an important, although subtle, aspect of drug toxicity.

In evaluating the role of genetic factors in chronic illness the concept of multifactorial causation is of utmost importance. Heated arguments have been engendered by rigid thinking along lines of a single causative factor. The operation of the genetic factor more often than not is by way of increasing (or reducing) the vulnerability of a given individual, or group of individuals, to a given disease which can be shown to be induced *primarily* by an environmental factor or agent. Differences in susceptibility to tuberculosis in different genetic stocks is well established from observation and finds experimental confirmation in the experiments of Lurie in pure strains of rabbits. Partially genetic control of susceptibility to rheumatic fever is fairly convincingly demonstrated, although the role of the streptococcus as the primary inducing factor is, of course, not denied. About 40 years ago it was thought that a genetic factor operated in the pathogenesis of pellagra. With the emphasis, to be sure appropriate, on the nutritional factor, the genetic factor may have been excessively ignored.

The desideratum in studies of genetic determination of suspectibility is definition of the mechanism. As a paradigm one can point to the recently elucidated genetic differences in susceptibility to hemolytic anemia from certain drugs. In Korea, when primaquine was given for malarial prophylaxis, a certain incidence of hemolytic anemia resulted. The predominant occurrence in Negro troops suggested a genetic factor in susceptibility. It has since been demonstrated that in something approaching 10% of Negro males there is an inherited enzymatic defect of the red blood cell which predisposes the red cell to hemolysis when exposed to one of a fairly large number of agents, including sulfanilamide and furadantin in addition to primaquine. The defect of the red cell is probably inherited as a sex-linked recessive, like hemophilia. It was a prior observation that the children admitted to hospitals with hemolytic anemia from moth-balls were almost exclusively Negro and predominantly males. The basis for the distribution of moth-ball poisoning is the same as that just described. Favism, a disease of public health importance in some areas where the bean of Vicia fava is a staple food, probably likewise has a genetic factor in the determination of the hemolytic crisis which is its prime manifestation; the mechanism of the genetic determination of susceptibility to favism is probably the same enzyme defect of the red cell as is involved in the drug-induced hemolytic anemias mentioned, although further work on this point is necessary. Extending far beyond the intrinsic significance of these examples is the insight provided into the collaboration of genes and environment. This example illustrates that the controversy between nature and nurture is absurd. We are dealing here with examples of "necessary and sufficient causes". Neither the drug nor the genetic defect is alone sufficient cause and both are necessary.

What determines the "rheumatophilic" individual who is genetically predisposed to rheumatic fever? What is inherited by those individuals with a genetic suspectibility to coronary artery disease or hypertension? The answers to such questions as these will facilitate identification of high risk populations and guide measures of prevention.

While discussing the role of genes in diseases in which environmental factors are of primary significance, mention can be made of the recently described influence of infectious disease on the distribution of genetic defects in the population—an interesting "turn about". In some populations in Africa the incidence of the sickling trait is as high as 40% in the population. This puzzling observation demands explanation since one would anticipate that genes would be "lost" from the fact that especially in primitive societies the persons who are affected by the homozygous condition of this recessive gene and have full-blown sickle cell anemia succumb well before the age of reproduction. The explanation for the high incidence of the gene has been found to be that those individuals who are heterozygous for the sickling gene—i.e., have the sickling trait—have a relative resistance to malaria. Apparently *Plasmodium falciparum* parasitizes red cells containing sickle hemoglobin only with difficulty. Therefore in malarious areas of the world it is an advantage to have the sickling trait. This phenomenon is referred to as *balanced polymorphism*. The same phenomenon is observed in the case of Mediterranean anemia. The individuals carrying the trait have increased resistance to malaria with the result that the trait is exceedingly frequent in malarious areas such as Greece and Thailand. The impact of infectious disease on the history of mankind is now familiar. A fascinating new chapter is being written with these discoveries of the inter-relationships of genetic constitution and disease. The sickle cell-malaria interrelationship is, furthermore, perhaps the first clear definition of the mechanism by which a gene influences susceptibility to infectious disease.

It is beyond the scope of this survey to make more than brief mention of the differences in blood group constitution which exist in groups of patients with particular varieties of disease. I refer to the excess of blood type A in patients with stomach cancer and of blood group O in patients with peptic ulcer. A possible explanation is that these diseases are, in considerable degree, genetically determined; that a single gene, or a group of genes, which increases the likelihood of these diseases occurring, is located in the same part of the same chromosome as the locus determining blood type; and that this segment of chromosome has in large segments of our population, as yet been incompletely separated through the process known as crossing-over. An alterative explanation which seems less likely is that the gene for a blood group has multiple effects, i.e., action extending beyond the mere determination of antigenic constitution of the red blood cell. Yet another possibility is that the A gene in some way protects against peptic ulcer.

The genetic aspects of medical geography, which previously concerned itself mainly with environ-

mental differences, is being developed to a high degree. Even in as heterogeneous a population as that of the United States the "melting pot" cannot possibly have functioned sufficiently long for complete alloy of differences in genetic susceptibility to disease.

In the first part of this survey, discussion concerned broad implications of the genetic constitution of populations on the incidence of disease—the effects of ionizing radiations, the inter-relationships of genetic abnormality (or at least genetic polymorphism) with disease as illustrated by the abnormal hemoglobins and malaria, the interplay of genetic and environmental factors in the production of disease. In this second part discussion will concern the behavior of genetic disease in the family unit—the unit with which the local public health worker must concern himself just as does the physician.

Of first importance are the laws discovered by the Bohemian monastic Gregor Mendel almost 100 years ago. Some diseases display what is referred to as a dominant pattern of inheritance. The disease trait is passed down from one generation to another with only half of the children of a single affected parent being affected. The example I will offer is the Marfan syndrome in which the affected person is likely to show dislocated lenses in the eye, abnormally long and spidery extremities, and weakness of the aorta leading to aneurysm. Most "dominant" diseases show a wide range of severity. Some cases which on close analysis are almost certainly affected show such mild manifestations as to escape detection. It is a rather good rule that in a given family the disease behaves in a relatively identical manner. The course in a given individual can be predicted from the course of events in older members of the family. Osteogenesis imperfecta ("brittle bones" with blue sclerae and progressive deafness) is another "dominant" disorder in which extraordinarily wide range of severity is observed. There are a few rare dominant traits such as aniridia (hereditary absence of the iris) in which the disease shows very little variability. The iris is either present or absent, the ratios of affected to unaffected are precisely as predicted by Mendel, and the theoretical pattern is followed precisely, with, of course, the expected chance deviations from the 1:1 ratio in individual families. Note that there is no sex difference in these so-called autosomal dominant traits.

In the case of so-callel recessive traits (of the non-sex-linked, or autosomal type), the affected individuals get one "abnormal" gene from one parent and one from the other. The disease manifests itself only when two abnormal genes are present, unlike the dominant traits which are manifested with the inheritance of only one abnormal gene. The ratio of affected to unaffected children of parents, each of whom carries the abnormal gene in single dose, is 1:3, i.e., only one-fourth of children show the disease. A disease inherited as a recessive tends to show several features of note: There is often consanguinity in the parents. If the parents are related, the chance of their carrying the same abnormal gene is increased. In the second place, the disease manifests itself in multiple members of one sibship (brothers and sisters) but not in successive generations. It is important to the public health to note that the gene for a "recessive" disease is relatively wide-spread in the general population. For example, albinism is most often inherited as an autosomal recessive. By the so-called Hardy-Weinberg law it can be calculated that, although only one in 20,000 individuals displays albinism, one in every 70 individuals carries the gene "in single dose"! In cystic fibrosis of the pancreas the incidence of the disease is somewhere between 1 in each 600 and 1 in each 1400 births but every 1 in 13 to 20 persons carries the gene in single dose. Prevention of reproduction by individuals manifesting a recessive disease trait can have little influence on the frequency of the gene in the population. As yet another generalization, it can be stated that most recessively inherited disorders are severe in their clinical expression with death before the age of reproduction whereas this is the exception for dominant traits.

The classical example of a sex-linked trait is hemophilia. Carrier women transmit the disease to half their sons. Half the daughters of carrier women are themselves carriers. Color blindness of the common type is also sex-linked. It is possible for a woman to be affected if her father is affected and her mother a carrier. In classical hemophilia affected females are rare because the disease is rare and the chances of an affected male and carrier female marrying is very slight. In color blindness females are more frequently involved because the trait is so much more common.

Sex-linkage should not be confused with sex influence or sex limitation. The gene for gout, for one example, and that for baldness for another are inherited as autosomal non-sex-linked dominants. However, because of hormonal considerations, the gene expresses itself almost exclusively in men.

It can be stated as a general principle that, al-

though the usual behavior of a given disease (dominant, recessive, sex-linked) is helpful in counselling a family in matters such as having more children after the birth of an affected child, or such as whether an affected person should have children, it is necessary to analyze the mode of inheritance and general behavior of the disease trait in each family. What appears to be the same disease may be inherited as a dominant in one family but as a recessive or sex-linked trait in another. Furthermore, the clinical behavior in a given family—the severity of manifestation and the grade of interference with performance—must be evaluated. No arbitrary or categorical statements should be made since in one family a given disease may be of little importance, whereas its influence is devastating in another. Socially valuable attributes may be inherited in the same family and may outweigh mild inherited disease. Even that a person is affected by grave inherited disease does not preclude valuable contributions to some phase of human endeavor. As a case in point, I like to cite Henri de Toulouse-Lautrec who seems to have been affected by osteogenesis imperfecta. The pleasure he has provided with his paintings of gay Parisian café life will be familiar to the reader.

Confusion exists with reference to many of the terms used in this field—congenital, genetic, hereditary, inherited, heritable, familial, heredofamilial. *Congenital* merely means "present at birth". A congenital condition may or may not be hereditary in its fundamental causation and future potentialities. It may, for example, be the result of some intrauterine insult to the fetus, for example, fetal-maternal blood group incompatibility or maternal rubella. Congenital syphilis and congenital toxoplasmosis are not hereditary in the genetic sense.

Genetic, inherited, hereditary and *heritable* are approximately synonymous.

Familial merely indicates that a given disease "runs in the family", i.e., occurs in multiple members of a family. Although the familial aggregation may be genetically determined, it may, on the other hand, have its basis in a common environment such as a common exposure to an infectious agent or particular diet. Or, and this is most often the case, environment and genetic constitution may collaborate in producing the observed familial aggregation. *Familial* and *heredofamilial* were used especially often in the past to indicate disease which occurred in multiple members of a sibship but not in the ancestors or descendants. In other words, it was used particularly for "recessive diseases". Actually, a recessive disease is just as genuinely inherited from the parents as is a dominant disease, even though the parents do not manifest the disease.

A mistaken impression is that genetic disease is not susceptible to treatment. A fatalistic attitude toward genetic disease is rather prevalent. One need only cite diabetes and gout to indicate the fallacy of this impression. Phenylketonuria is a recessively inherited disorder in which severe mental impairment occurs as the most serious manifestation. It is now clear that if the infant affected with this disorder can be recognized early enough and maintained on a phenylalanine-free diet development will proceed normally. Galactosemia, a disease resulting from the enzymatic incompetence of the infant to metabolize milk sugar, may prove another example. Dietary therapy in the form of low fat intake for persons with genetic suspectibility to coronary artery disease is yet another case in point. Admittedly these are patching procedures.

This brings us to a consideration of screening for genetic disease. Would it not be justified to test the diaper urine of all infants who are brought by their mothers for 6 weeks check-up, to see if there are signs of phenylketonuria? Screening procedures can be rendered more efficient if genetic factors are appreciated. For example, in diabetes-detection drives, the members of families of diabetic individuals particularly should be urged to cooperate.

It is beyond the scope of this brief survey to discuss the genetic indications for sterilization. Usually the cases in which an indication is present are instances of intellectual and moral degeneracy in which the genetics is complex. Most states have laws bearing on sterilization.

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Spontaneous Hemorrhage

A Clinical Entity

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BLEEDING is the common pernicious factor in subarachnoid hemorrhage, coronary occlusion, gastrointestinal bleeding, epistaxis and many other diseases. These diseases have been considered to be and are treated as separate entities. I have advanced the theory that they may instead be a single disease[1-6]. I have called the disease Spontaneous Hemorrhage and maintained that it is a clinical entity in itself, that it is hormonal in origin and that its infinite manifestations depend upon where it strikes. The results of the application of this theory have been reported in previous articles. This discussion is limited to three aspects of this disease: the concept of a bleeding state, an interpretation of the pathology and the problem of hemostasis.

The theory is that man has the capacity to mobilize a constellation of forces which, by their integration and interaction, creates a bleeding site and produces a hemorrhage, usually without warning, apparent reason or cause. These forces are derived from the mechanism for bleeding which man already possesses—the menstrual cycle. I consider the bleeding phase of the menstrual cycle to be a form of spontaneous hemorrhage that nature sanctions for a special purpose. Since both sexes have all the prerequisites for bleeding except the uterus and the cycle, then this same or a similar hormone complex may come into existence and causes bleeding in locations not sanctioned by nature.

The postulate of a vascular toxin is necessary to uphold this theory. This toxin is produced by hormonal changes analogous to those which create the toxin that precipitates the bleeding phase of the menstrual cycle[7,8]. One can only surmise where this toxin will attack and whether variants have a peculiar affinity for certain arteries, veins or capillary beds, or if conditions in the vessels render them more vulnerable to injury.

Sudden, unexpected and often unsuspected hemorrhage is by no means rare. In fact, it is so common that there are few indeed who have not had this experience during their lifetime. The most common forms, epistaxis and rectal and uterine bleeding, are relatively benign. But when blood is released suddenly into cavities, organs or spaces, such as the brain, the eye, the walls of arteries, the gastrointestinal tract, the bronchial tree, the genitourinary system, or elsewhere, the results can be calamitous and even catastrophic. One small drop invading the wall of a coronary artery, especially in the young, can end in a fatality just as well as a much larger quantity suddenly liberated into the gastrointestinal tract. If this theory proves to be correct, then this disease has a higher morbidity and mortality than any other human affliction and is one with which every branch of medicine must contend.

Before making the diagnosis of spontaneous hemorrhage, one must eliminate all other causes of bleeding. The so-called hemorrhagic disorders as well as bleeding arising from tumors, hiatus hernia, infections and others of a similar nature are not included. I believe gastrointestinal bleeding, including bleeding peptic ulcers and esophageal varices, as well as many other sources of hemorrhage mentioned during this discussion, to be forms of this disease.

Delayed hemorrhage after operation or trauma also is included. Such bleeding occurs usually six to ten days after the procedure or injury, as, for example, delayed posttonsillectomy hemorrhage, but it may be manifest during or immediately after operation by uncontrollable oozing. In many hospitals, obtaining bleeding and clotting times is routine, but these tests cannot be considered as absolute assurance that there will be no tendency to bleed.

There are no abnormalities of the blood that can be useful for establishing the diagnosis since the findings are not consistent. Anemia may indicate that one or more hemorrhages have occurred. On the other hand, low grade polycythemia is fairly frequent and may point to a potential bleeder. Coagulation factors during a hemorrhage are normal, and cell counts and characteristics and serum analyses are not altered enough to be significant.

An extensive clinical experience, a few facts and much speculation are the only means of supporting this theory at present since no laboratory or other criteria exist by which this disease can be discovered

or its course observed. Although blood may be very much in evidence, even the bleeding site in a large proportion of cases cannot be found. The cause of bleeding is even more nebulous than the sources. The term "spontaneous" is more fitting than idiopathic bleeding or hemorrhagic diathesis, but neither properly describes this disease.

THE BLEEDING STATE

The menstrual cycle has a mechanism for starting the bleeding and another for stopping it. An attack of epistaxis also must have a mechanism for starting the bleeding and, as happens in most instances, another for stopping it. When this mechanism fails in menstruation, the bleeding is known as functional uterine hemorrhage and certain measures, including the administration of estrogen, are taken to stop it. When this mechanism fails in epistaxis, then other measures, such as packing, pressure, cauterization and, in extreme cases, ligation of the facial artery, become necessary. But hundreds of times I have found that administering estrogen is much more effective and quickly halts the bleeding. Menger[9] also reported this experience.

Regardless of the lesion, whether it be a bleeding peptic ulcer, uncomplicated internal hemorrhoids, varicosities of the esophagus, erosive gastritis, or any other similar lesion, no patient bleeds all the time. When subtotal gastrectomy is done to excise a bleeding gastric ulcer, an open vessel frequently is found peering out of its base but there is no blood in the stomach. When epistaxis is arrested by estrogen, the open vessel can be seen easily but no blood is escaping. Even when a patient is bleeding, blood will not flow from any other site since wounds made for reaching these lesions do not bleed more than is expected and heal promptly.

Therefore, there must be circumstances and conditions under which a patient will bleed and another under which he will not bleed, and there must be a decided difference between the two. That difference cannot be in the lesion but must be in the organism itself. If the organism is not prepared for bleeding, there will be no hemorrhage. When it is prepared, regardless of whether or not a lesion is open, one will open and the bleeding can be of any proportions from a few drops of blood to a massive hemorrhage which can be one of the most formidable and alarming problems in medicine. The bleeding state then means that the circumstances and conditions for bleeding have been created and have come to fruition.

The bleeding state does not refer to the hemorrhage alone but to the period of changing metabolic activity which precedes the bleeding and makes it not only possible but imperative. It is analogous to the premenstrual period and is the time of rapid hormonal changes. The bleeding state is therefore a state of hormonal imbalance which inevitably leads to bleeding unless it is interrupted or neutralized.

The bleeding state is not a permanent state. Hence, it is episodic, with intervals that might be years apart. It is something the organism is capable of after the proper circumstances and conditions have initiated the process. This process, of course, has many steps, nearly all of which are unknown. As they approach their summit, the patient may become restless, irritable and insomnic. The pulse increases in rate and volume, and the face becomes slightly flushed. Occasionally both men and women tell of hot flushes before the bleeding begins. Often there is a history of tension, stress or other emotional hyperactivity preceding the bleeding. Headache is common just before an intracranial hemorrhage or a nosebleed. Frequently a history of epistaxis in childhood denotes the endocrine balance has been unstable and is more likely to be sensitive.

If this period can be recognized, preventing the hemorrhage may become possible, but no applicable tests or standards have been invented. However, certain personality changes, while not too reliable, can be useful. They are irritability, mild depression, insomnia, and evidence of tension and stress which are comparable to the symptoms of premenstrual tension.

I have previously pointed out that during a massive hemorrhage the whole organism seems bent upon pumping out every drop it can from whatever lesion it has created for that purpose. Only recently has the massiveness of the bleeding been the subject of other comment. Child and Donovan[10], discussing the problems of bleeding from esophageal varices in patients with portal hypertension, say:

> Before considering in detail portal hypertension due to extrahepatic and intrahepatic block, we should like to comment on several problems common to both types. The first concerns the immediate etiology of the massive hemorrhages that threaten the lives of these patients. At first thought, the cause of hemorrhage from varices seems simple enough, but proof of why patients bleed massively from esophagogastric varices has proved elusive.
>
> Pathologists who describe what they see at autopsy have learned that in about 50% of patients dying of variceal hemorrhage frank ulceration is present; in 40% there appears to be a clean tear, as though the varix had ruptured mechanically; and in the remaining 10% a site of hemorrhage cannot be demonstrated.

The two conventional explanations, therefore, for hemorrhage are rupture due to increased pressure and ulceration secondary to esophagitis. If high pressure be the explanation, why do not the other varices such as those of the coronary system or in the retropancreatic area, likewise bleed massively? Intraperitoneal variceal hemorrhage, however, is almost unheard of. Or if ulceration be the primary cause of a given hemorrhage, why is this not preceded by dyspepsia suggesting esophagitis? Yet, in patients with varices, incompetence of the esophagogastric sphinteric mechanism has not been demonstrated. From time to time it has been intimated that the hemorrhagic diathesis associated with portal hypertension and congestive splenomegaly might precipitate esophagogastric hemorrhage. At present, the consensus is that thrombocytopenia does not initiate bleeding, though it may encourage continuing hemorrhage.

They report a case of a young woman with portal venous thrombosis for whom a limited esophagogastrectomy was done to protect her from bleeding if the varices should recur. Two years later, all the varices had reappeared but bleeding did not recur during the follow-up period of five years. However, in a postcript to their article, they report that she bled massively six months later. While the intervals between bleeding attacks usually are not so long, this case illustrates the persistence of the disease and the eventual return of the bleeding state to those who have it.

The difference between a slight hemorrhage and massive bleeding is obviously only one of degree. Moreover, the quantity of blood lost does not depend upon the blood pressure, size of the lesion or the magnitude of vessels. A blood vessel does not open and permit blood to escape passively. Instead the bleeding is sometimes so massive that another force apparently must be involved, a force that has such fury and violence that it resists all efforts to arrest the hemorrhage and causes exsanguination, shock and death with startling rapidity. That force must be the power of the bleeding state immediately before the hemorrhage, a force that is now intangible and cannot be identified or measured.

PATHOLOGY

The lesions from which blood is released are many and varied. They vary all the way from gross, easily-discovered vessels to apparently no lesions at all. The absence of a lesion must be considered as an actual fact and not the failure of investigators to find it. This paradox stems from the nature of the disease. Similarly the lesion may disappear without a trace, as in the nose, or the released blood may produce damage through the process of absorption, especially in the walls of blood vessels. Cases of spontaneous bleeding into the knee joint, the pericardial sac and the Bartholin ducts creating bilateral cysts denote that this disease is no respecter of structures.

The terms erosions, weakening of walls, medial necrosis, vascularization processes, telangiectasia, varicosities, rupture of vessels, aneurysms, capillary fragility, bleeding ulcers and erosive gastritis are the vocabulary of this disease; but the most common statement, and one with which there seems to be no disagreement, is that in a large proportion of cases, no lesion can be found. Granulomatous tissue often is given at the source of bleeding. This kind of tissue cannot bleed enough, except from large surfaces, to cause death without the power of the bleeding state behind it as the following case demonstrates:

A Negro woman, age 41, had an unventful convalescence from a hysterectomy for a benign lesion and left the hospital in excellent condition after ten days. Four days later profuse vaginal bleeding suddenly occurred, and she was readmitted, in shock. The vagina was packed, several tranfusions were given, and the bleeding stopped. After four more days, her condition much improved, the pack was removed and she was allowed to be out of bed. Eight days later she began bleeding again and was taken to the operating room. Through a vaginal speculum, the source of blood was found to be the edge of the vagina where the uterus had been amputated. The abdomen was entered, ligating sutures were put into this cuff, and a pack again inserted into the vagina. One hour later blood was pouring through this pack. Twelve hours later, the abdomen was reopened. A large quantity of blood was found in the peritoneal cavity, and another attempt was made to suture the cuff. But the bleeding could not be controlled and, despite adequate blood replacement, she died 25 days after the original laparotomy. Postmortem examination revealed no other source of bleeding than the narrow rim of granular tissue around the vaginal cuff.

The clinical picture is complicated by the fact that an obvious source of bleeding may not be the actual source and, further, that the source of bleeding can be transient. For example, Brick and Palmer[11] say, "The observations presented imply an important warning against immediate assumption that esophageal varices are at fault when the cirrhotic patient presents himself with massive hemorrhage." They point out that such patients, even

though they have varices, can have almost any other lesion for bleeding as those who are without cirrhosis. Then they confirm what surgeons seldom recognize while they are searching for a bleeding point in the stomach: "This important disease (erosive gastritis) one must note, is an ephemeral one. Large areas of the superficial layer of the gastric mucosa may suddenly exfoliate, to permit massive hemorrhage but it heals just as quickly." Exfoliation and re-creation of another mucous membrane, the endometrium, also is attended by bleeding and is a prominent feature of the menstrual cycle.

The results of hemorrhage may be divided roughly into two categories: first, bleeding into open spaces in which the blood is not confined and inflicts injury not only because of the actual loss of blood but also because of the insult to these spaces, such as the gastrointestinal tract and the lungs, in which it is lost; and second, release of blood in small quantities into organs and cavities where it can do irreparable damage.

There is no need to enlarge upon the results of spontaneous bleeding into closed spaces since, with one exception, they are too well known to require further comment. That exception is the vascularization process described by Paterson[12], Wartman[13], and Winternitz[14] and his group, as well as others, from which blood invades the walls of the large arteries and initiates coronary thrombosis as well as other lesions.

These vascularization processes are, according to Paterson[15], the cause of 90% of coronary occlusions as well as an obvious reason for the progressive build-up of plaques. A network of capillaries develops at one small point in the intima of a coronary artery and one of these capillaries then ruptures. The release of even a drop of blood in such a vital spot can be fatal. Although it may not occlude the artery by mechanical means it can be the precursor of a thrombus.

Moffatt, Paterson and Mills[16] recently developed a simple way of demonstrating, almost grossly, these vascularization processes in arteries. The media is separated from the intima and the intima, stretched on a glass slide, is put in a refrigerator for three or four days. The color changes from an opaque yellow to a slightly transparent gray in which can be seen the red streaks and dots representing the capillaries and hemorrhage. Under low magnification of the dissecting microscope, the capillary network and minute collections of free blood can easily be observed. Recognition of these vascularization processes as the forerunners of serious disease in any of the large vessels and of the heart can be of far greater practical value than the current commotion over the cholesterol content of the blood.

Abundant evidence indicates that the liver has an important role in the metabolism of estrogen. Lloyd and Williams[17] believe that the ability of the damaged liver to inactivate estrogen is so much impaired that the circulating estrogen, particularly the unconjugated or the biologically active form, is increased, even though the total amount is still less than in the normal individual. After giving estrogen to a cirrhotic patient with gynecomastia, Coodley and Molle[18] observed that the fall in estrogen secretion, particularly the ratio of free to total estrogens, paralleled the improvement in liver function. Since bleeding from esophageal varices is often associated with cirrhosis and hence with a disordered estrogen metabolism, this situation offers a special opportunity for studying the relation of estrogen to bleeding.

According to my theory of spontaneous hemorrhage, esophageal varices, indeed varices almost anywhere, are not entirely due to obstructive phenomena but also to the attack of a vascular toxin on the veins. The interplay of these forces creates the varices. If that is true, then these venous dilatations will not remain static but will fluctuate with hormonal changes. It is a common observation that in some women who have varicose veins of the legs, these veins become extremely painful and dilated and have the semblance of being inflamed just before menstruation begins. During pregnancy varicosities sometimes enlarge tremendously, occasionally spread over the vulva and are not unknown even on the arms, the breasts and the abdomen. Such veins cannot be the result of venous obstruction.

That esophageal varices are constantly changing apparently must have come as a surprise to Palmer[19], but he did not refer their variable behavior to the endocrines. He declared: "Following perfection of operations for limiting or reducing varices by shunting portal blood around the liver, it became evident that the dynamic capabilities of varices had previously been badly underestimated. It was a revelation to discover that esophageal varices must be expected to wax and wane even though the liver histopathology remains static." Other comments on his study of these varices in 133 patients are worth quoting:

It is clear that to the clinician the most significant characteristic of the natural history of esophageal varices which are secondary to cirrhosis is their propensity toward unpredictable dynamic fluctuations.

Varices are constantly changing in diameter and extent, to the point of disappearing entirely from time to time. When only spot checks are made and examinations are carried out only during the fasting state, as in the present study, it is likely that many and major fluctuations pass unrecognized. Varices which seem static when observed at long—or even short—intervals may have undergone wide variations during the interims. . . . These dynamic variceal fluctuations, particularly the disappearances and reappearances, create important practical problems in the management of the patients with cirrhosis.

It is not possible, for instance, to determine even the incidence of esophageal varices in cirrhosis. The best one can do in order to fill the need for a figure for purposes of his clinical thinking is to say that, with the ordinary opportunities which present themselves for the study of cirrhotic patients, a certain per cent—68% in local experience—will be found to have varices. It is to be understood, however, that failure to find varices upon a single esophagoscopic examination gives no assurance that varices are not potentially present, and that hemorrhage from varices is not an imminent threat. . . . Obviously one does not recommend surgical portal decompression if varices are not found, yet a repeat examination only a short while later may reveal severe varices for which operation must be urged.

These variceal vagaries express themselves in another way: there is a group of patients of not inconsiderable size for whom portacaval shunt is recommended because of large varices and perhaps a history of hemorrhage, but in whom a second preoperative examination reveals that the varices have disappeared. This usually engenders a certain degree of embarrassment for all concerned.

. . . The level of the portal venous pressure showed no correlation with the diameter or extent of the varices, and could not be estimated even roughly from the esophagoscopic appearances. The pressure, like varix severity, varied considerably from time to time, without relation to changes in the clinical picture.

The episodic nature of the bleeding, the multiplicity and variety of the lesions, the disproportion between the size and character of the lesions and the quantity of blood which escapes from them, as well as the rapidity with which they come into being and then disappear, also point to the existence of a vascular toxin and justify the opinion that the lesions are temporary outlets for the release of blood during the bleeding state. Their transience can be easily seen in the stomach, the hemorrhoidal plexus and the nose, where the engorgement of the nasal mucous membrane promptly subsides while the bleeding vessel is still open. Normally, no vessel on the nasal septum is capable of carrying so much blood.

Similarly, open vessels which are not bleeding frequently are found in the stomach and in nonspecific ulcers of the small intestine. Several facts lead to the conclusion that bleeding peptic ulcers are primarily bleeding lesions which heal after the bleeding state has disappeared and their mission has been accomplished. The majority of such ulcers are asymptomatic, they are smaller and differ in construction from inflammatory ulcers and the bleeding seldom depends upon the penetration of vessels[20]. That ulcers will invade the large vessels of the stomach is especially suspected. Certainly perforating ulcers bore right through highly vascular tissues without bleeding. Bleeding happens sometimes after the perforation but the incidence of these overlapping syndromes increases with age and parallels those of other vascular accidents.

In the brain, the eye, and the walls of arteries where the blood cannot escape, the rate and explosiveness of the bleeding determine the outcome; but even under these circumstances, the actual bleeding lesion is elusive. The quantity of blood lost is much less important than where it has accumulated.

The opinion that the bleeding lesion is secondary to the bleeding state is upheld by the fact that after the lesion has been unquestionably eliminated in one way or another, bleeding from other lesions in the same or different tissues all too frequently occurs. The new lesion is created by the return of the bleeding state and provides another analogy to the bleeding phase of the menstrual cycle. It is not unusual for women after hysterectomy to have vicarious menstruation from the rectum, nose, stomach and breasts when the normal exit for bleeding has been withdrawn.

A connotation of this opinion is if a lesion has been successfully abolished or the hemorrhage arrested, the patient has been relieved only of the immediate threat and has not been cured of the disease. Upon the return of the bleeding state, there will be another lesion and another hemorrhage. The following case illustrates this point:

A 50 year old white man who was extremely irritable and tense had been known to have a duodenal ulcer for a number of years until partial obstruction of the duodenum demanded relief and a posterior gastrojejunostomy was done. The operation relieved the obstruction but not the pain, and three years later vagotomy was done and was successful. The first hemorrhage was from the lungs 14 months after the vagotomy. Roentgen ray studies and bronchoscopy failed to reveal the source of bleeding. Repeated gastrointestinal bleeding, sometimes with hemoptysis and at others with only tarry stools, followed during

the next two years. Roentgen examinations failed to disclose the source of bleeding in the gastrointestinal tract.

After a massive hemorrhage, partial gastrectomy was done. When the stomach was opened, no source of bleeding could be found. The pathologist later reported erosive gastritis with two small ulcers. Six years elapsed before the patient had a massive hemorrhage from a telangiectatic area at the base of his tongue. This hemorrhage was quickly controlled with intravenous estrogen. A few months before this episode, he had had an epithelioma of the lip treated with roentgen ray. A small, painful ulcer which persisted became a constant annoyance. Six months after the last hemorrhage, he agreed to have the ulcer excised. Twelve hours after operation he had a massive hemorrhage from his nose which also responded quickly to estrogen therapy.

THE PROBLEM OF HEMOSTASIS

Arresting the hemorrhage is the first concern of the clinician, and the problems connected with this kind of bleeding are not simple. If he turns to the literature for guidance, he encounters such a volume of contradictory information and advice as to leave him with a baffling and confused sense of indecision. Should the nose be packed when it is known that blood will pour right through the packs, or the septum be cauterized at the risk of permanent injury? Of what value are roentgen studies of the gastrointestinal tract when clinicians of equal merit differ over whether they should be done and when there is the likelihood that no source of bleeding will be found even though blood is very much in evidence?

Suppose a bleeding peptic ulcer, erosive gastritis, or no lesion at all is present; is the heroic and empiric treatment of gastrectomy justified when there is always the possibility of recurrence as well as the one of creating a digestive cripple? Why should the hemorrhoidal area sometimes continue to bleed for days after every possible bleeding point has been carefully ligated? What should have been done for the patient who bled to death from an insignificant granular area around the cuff of the vagina or for the other who bled from the back of the tongue and nose years after the bleeding area in the stomach had been excised? When and how much blood should be given, or should transfusions be withheld altogether? What are the indications for operation when surgical interference during a hemorrhage has such a high mortality? What is the treatment for bleeding when the lesions are unknown or inaccessible such as those in the genitourinary tract, the bronchial tree or the pancreas?

The principal reason for such a diversity of opinion is that spontaneous bleeding is considered to be and is treated as if it were surgical or traumatic hemorrhage. From this misconception and others pertaining to hemostasis, stem a host of notions and beliefs that are utterly without foundation.

Traumatic or surgical hemorrhage is what the term implies. There is a definite place and a definite point from which blood is escaping. The location must be within the restricted area of injury and needs only to be explored for one to find and control the hemorrhage. Spontaneous hemorrhage arises from a change in the vessel wall and seldom is due to the actual penetration of the walls of large vessels. In traumatic hemorrhage, a large vessel must be opened for enough blood to escape to be of consequence, but in spontaneous hemorrhage, a huge quantity of blood can be forced out of apparently trivial lesions.

Other factors than trauma or the penetration of vessels must be the cause of spontaneous bleeding. These factors must arise from a systemic disorder which, in my opinion, lies somewhere in the endocrine balance. The problem of hemostasis in spontaneous bleeding has been either ignored or neglected or managed as if it were traumatic hemorrhage. The literature makes no distinction between the two and thus the fallacies of this approach have been perpetuated.

Perhaps the principal fallacy is that the coagulation mechanism of the blood is the leading agent for controlling a spontaneous hemorrhage, especially when the bleeding vessel is obscure or cannot be reached. While I am not denying the value and importance of coagulation, obviously the time necessary for producing a clot of sufficient density and tenacity to obstruct a vessel is far too long for the clot to be useful. In fact, clotting and bleeding times have a lesser place in this condition than in traumatic bleeding.

Hoffman's[21] summary of the current thinking on hemostasis agrees with the opinions of nearly all investigators, but it applies to traumatic hemorrhage. He says:

That the clotting of blood is in some way related to the arresting of bleeding is obviously suggested from the nature of the clot. Centuries ago the clot was already thought of as a mechanical plug or a seal. But modern research has cast some doubt on the importance of fibrin in hemostasis and has certainly brought to light other factors involved in

the process. The complicated nature of the hemostatic process is shown in the twofold paradox that in hemophilia, in which the clotting time is greatly prolonged, the bleeding time may be normal and that in thrombocytopenic purpura the bleeding time is prolonged even though the clotting time is frequently normal.

Direct visualization of small blood vessels during local hemorrhage induced by the cutting of a single vessel has shown that the first reaction to the injury is reflex constriction of the open end of the vessel. This contraction is not sufficient to arrest the flow of blood but it may diminish its speed. Agglutination of platelets and adherence of the platelets to the wall of the injured vessel soon occur and may produce a platelet plug. The disintegrated platelets in this plug as well as in the surrounding tissues produce vasoconstrictor substances which enhance and prolong the constriction of the cut vessel and also cause constriction of neighboring vessels. In most instances these events are sufficient to cause cessation of bleeding in two minutes without the aid of a fibrin clot. In more adverse circumstances the bleeding is sufficiently prolonged for a fibrin clot to develop in the surrounding tissues and in association with the platelet plug. Now bleeding is stanched by (1) the further constriction due to the liberation of more vasoconstrictor substances from platelets disintegrated by the accumulated thrombin, (2) the diminished blood flow, (3) the increased resistance of surrounding tissues as the shed blood accumulates in them, and (4) the combined plugging by the agglutinated platelets and the fibrin clot. Capillary bleeding may be arrested through the adhesion of opposing surfaces of endothelium as contraction takes place.

To this statement can be added Quick's[22] opinion that the adhesion and constriction of opposing surfaces will not only arrest bleeding in capillary vessels but in larger vessels as well. They are factors in maintaining a complicated progression of events in an orderly cycle of reactions by various components of blood and tissue which stops bleeding before the agglutination of platelets hardly has begun.

If the clinician searches the literature for the orderly and complicated progression of events which stanches a spontaneous hemorrhage, he will find no information at all on the differences between the hemostatic processes in a severed vessel and in a diseased vessel incapable of adhesion, constriction and retraction. Yet there must be such a cycle of reactions since the menstrual flow gradually dwindles and stops and the majority of spontaneous hemorrhages cease without interference. The menstrual flow is arrested through endocrine changes, and it is reasonable to assume that spontaneous bleeding also reacts to similar changes.

Another misconception is that immediate blood replacement is as essential for spontaneous bleeding as it is for traumatic or surgical hemorrhage. But patients who are bleeding spontaneously seem to withstand the loss of large quantities of blood with impunity, and it is possible that the sudden release of the bleeding state is just as much the cause of shock as the quantity of blood lost. Since the nature of the shock may be different and transfusions only may aggravate it, I withhold them until the bleeding stops or is stopped with the hormone, or else give the hormone with a transfusion by inserting it into the tube. I have not had occasion to regret this delay.

The management of the following case illustrates this point: A 74 year old, poorly nourished white woman fainted in her home and was quickly put in bed. She was extremely pale, and the blood pressure was 90/60 mm. Hg. Just before my examination, she had a small black stool. Assuming she had a gastrointestinal hemorrhage from an asymptomatic lesion, I gave her 20 mg. of estrogen intravenously and sent her to the hospital. Her condition on arrival was much improved, but there were only 3 gm. of hemoglobin in 100 cc. of blood. Twelve hours later, 10 mg. of estrogen was given, and as the improvement continued, a transfusion was started. Three days later she had a small black stool, and another 10 mg. of estrogen was administered. After an hour, she received 500 cc. of blood. The bleeding seemed to be completely arrested, and two more transfusions were given during the next two days. She has been free of bleeding for ten months, is rapidly gaining strength and weight, and the blood hemoglobin is approaching 11 gm. The source of the bleeding could not be found.

Osler[23], besides noticing that purpura may occur with or replace menstruation, observed a tremendous difference in the acceptance of transfusions between patients with spontaneous hemorrhage and those with traumatic bleeding. Rienhoff[24], describing a case in which the patient died from spontaneous bleeding, again called attention to this point:

> The lesson that should be learned, it would seem, is that regardless of the fact that almost unlimited quantities of blood are available in blood banks, or even fresh blood for that matter, after a certain number of transfusions, for some unknown reason, the platelets in the recipient's blood will disappear and the patient will succumb to an (as yet) unexplained type of purpura. In the past it was always claimed that in the case of continuous and massive transfusions something was lost in repeated or prolonged hemorrhages that cannot be replaced from a donor.

In my experience, massive transfusing is not the innocuous procedure it is generally considered to be. Even a single transfusion may renew a hemorrhage, not by raising the blood pressure but by upsetting the whole organism. Moreover, pouring blood in just to have it poured out may deepen such shock as is already present.

The first objective of emergency therapy is to do what nature so often does—convert the bleeding state into the non-bleeding state. That nature is capable of accomplishing this feat is beyond question even when large vessels have been bleeding. I believe estrogen given intravenously the best agent now available for this purpose. However, I do not consider this agent to be completely adequate. When the toxin is discovered, or better means for measuring the circulating hormones are invented, perhaps other compounds will be found for converting the bleeding state into the non-bleeding state.

Bleeding into closed spaces or the walls of large vessels compounds the problems. Perhaps administering estrogen can only prevent the extension of the lesion. If the blood escapes under pressure or is released suddenly, irreparable damage can be done almost immediately and long before any therapy directed at the bleeding itself can be undertaken.

The action of estrogen is undetermined. Whether it constricts the vessels, has serotonin-like qualities or neutralizes the vascular toxin I have postulated is, of course, unknown. That it has a telling effect can be seen easily in the nose. In other cases, the color of bleeding vessels changed from a dusky cyanotic purple to a normal hue while the bleeding stopped even though the apertures were plainly visible and had no clots in them. This hormone will not stop the bleeding like one shuts off a faucet. It requires time for its action—at least 30 to 45 minutes, after which the dose can be repeated if necessary. Undoubtedly some will be lost with the hemorrhage; furthermore, its utilization will depend upon such factors as the rate and manner of absorption, conversion and destruction. Hence the quantity required is extremely variable. Probably the relation of liver function to estrogen metabolism has a much greater role in spontaneous bleeding than it now appears.

Whether or not one is justified in waiting for this action depends upon the courage, experience, knowledge and judgment of the clinician. He will discover that intravenous estrogen sometimes can bring about unusual and dramatic results in situations where hormonal support would be least expected to be of value.

I have reported several series of cases, most of which were instances of epistaxis. These reports describe the therapeutic method and results and include cases of subarachnoid hemorrhage, gastrointestinal bleeding of known and obscure origin, genitourinary bleeding, delayed postoperative and posttraumatic bleeding and many others.

When applied to bleeding into the walls of large arteries, this theory is more difficult to uphold, since there is no opportunity for treatment. However, studies have demonstrated that patients who have received estrogens for carcinoma of the prostate and breasts do not have the extensive atheromatous invasion of the walls of these vessels which is found in others who have not had the benefit of this therapy. Of particular interest is Masters'[25] discovery of the marked increase in cellular activity in the media of blood vessels leading to organs stimulated by estrogen and his observation that "within the last two years it has become increasingly apparent that the gonads are the Achilles' heel of the aging process."

The long term prophylatic value of hormone therapy for bleeding has, as yet, not been demonstrated. However, since the administration of intravenous estrogen to hundreds of patients has never produced symptoms more serious than headache or nausea, this treatment can be given safely if an impending hemorrhage is suspected.

It is useful also for the preoperative preparation of patients in the declining years, especially those who are about to undergo prostatectomy or plastic operations on the vagina[26]. Not only does it provide valuable support to the cardiovascular system and the psyche, but it seems to reduce the persistent oozing that so insidiously depletes the blood volume.

SUMMARY

Spontaneous hemorrhage is a clinical entity in itself. It is hormonal in origin, has infinite manifestations depending upon where it strikes and has a higher morbidity and mortality than any other human affliction. It comprises many conditions that are considered to be and are treated as separate diseases. The most common forms are epistaxis, gastrointestinal bleeding of known and obscure origin, coronary occlusion and intracranial hemorrhage, besides many others.

This article discusses three aspects of the disease —the bleeding state, the pathology, and some problems of hemostasis. It advances the concept of a

bleeding state. This state is analogous to the premenstrual state and is the time of rapid hormonal changes preceding the bleeding. The numerous and varied lesions are considered to be merely avenues for the release of blood during the bleeding state. Spontaneous hemorrhage is treated at present as if it were traumatic or surgical hemorrhage. These are two different kinds of bleeding, and the treatment of one is illogical and inadequate for the other since they do not have the same mechanism for hemostasis.

This theory is based on an extensive clinical experience with hundreds of cases. The results of the hormonal management of a variety of these conditions have appeared in other publications.

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Five Years (1951-1956) Of Examinations For Intestinal Parasites At A 1000 Bed Hospital

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IN THE MEDICAL COLLEGE OF VIRGINIA Hospital Laboratories, during the period from July 1951 to June 1956, 5955 stool specimens on 3674 patients were examined for intestinal parasites. In the same period, 296 scotch tape preparations from 258 patients were examined.

The purpose of this paper is to present this data and classification of positive results in relation to age, race and geographical location of patients, after a brief review of the methods used.

ROUTINE LABORATORY METHODS

The examination of stool specimens for intestinal parasites is routinely made by the following procedures[1,2,3]:

1. Direct Smear:
   Saline and iodine preparations are made, one on each specimen. Three of these preparations are examined if the material is insufficient for concentration. The saline preparation serves to detect motile forms of parasites, that is, trophozoites or larvae, while the iodine preparation is used to detect cysts of protozoa.

Both preparations are useful in giving the examiner an idea of the intensity of the infection.

Specimens containing barium or mineral oil are considered unsatisfactory for these examinations.

2. Concentration Methods:
   a. Zinc sulfate contrifugal floatation method:
      This procedure, very useful in the detection of light eggs of helminths and cysts of protozoa, is performed on each suitable stool specimen.
   b. Sedimentation method:
      The sedimentation method is used when the presence of eggs, which will not float, is suspected. It was a procedure originally devised for the concentration of all eggs of helminths, but used particularly to establish the presence of heavy eggs, for instance, Schistosome eggs, an organism not found in this country. The procedure is especially useful in the detection of unfertilized eggs of Ascaris (Roundworm) which have a specific gravity value of about 1.250, and are therefore too heavy to float in a 33% zinc sulfate solution which has a specific gravity of 1.180. These eggs may be missed in a direct examination of the stool specimen.

Due to the large output of eggs by the female Ascaris worm (200,000 a day), only the first stool specimen on a patient is examined by this method unless the patient has been in the tropics, or the physician specifically requests it.

3. Amoeba Cultures:
   Amoeba cultures are performed when indicated, using the Nelson[4,5] medium.
4. Scotch Tape Preparations:
   Scotch tape preparations are recommended and examined for the detection of pinworm infection.

From the Department of Clinical Pathology and Hospital Laboratories, Medical College of Virginia.

	1951-1952		1952-1953		1953-1954		1954-1955		1955-1956		Total	
Number of Stools	888		1283		1256		1137		1391		5955	
Individuals	535		782		757		718		882		3674	
Positives (Number and Percentages)	34	6.3%	65	8.3%	49	6.4%	50	6.9%	46	5.2%	244	6.6%
Patients with Multiple Infection	7	1.3%	8	1.0%	9	1.1%	9	1.2%	5	0.5%	38	1.0%

TABLE 1. Results of five years of examinations of stools for ova and parasites. Percentages in relation to number of individuals examined.

Endamoeba histolytica	2*	1.1%	Trichomonas hominis	5	2.7%
Endamoeba coli	76	42%	Endamoeba butschlii	1	0.5%
Endolimax nana	22	12%	Giardia lamblia	73	40%
Total Protozoa 179 4.8%					
Ascaris lumbricoides	52*	46%	Strongyloides stercoralis	7§	6.1%
Enterobius vermicularis	22†	19%	Trichostrongylus orientalis	1	0.8%
Trichuris trichiura	23	20%	Heterodera radicola#	1	0.8%
Necator americanus	6‡	5.4%	Taenia saginata	1	0.8%
Total Helminths 113 3.0%					

*7 cases of unfertilized eggs found; 8 cases adult worm identified.
†3 cases adult worm identified.
‡1 case was a repeated examination in another year.
§1 case was a repeated examination in another year.
¶1 case of Trophozoites and 1 case of Cysts found.
#Spurious (plant) parasite.

Grand Total 292 7.8%

TABLE 2. Distribution of the different parasites found with approximate percentage in relation to number of positive specimens in each group (1951-1956).

PRESENTATION OF DATA

Table 1.

Table 1 presents the total and single specimen number of stool specimens examined each year and in five years, with positive findings encountered. 5955 stool specimens were examined on 3674 patients of which 244 or 6.6% were positive for parasites, and 38 or 1% had multiple infections.

Table 2.

Table 2 shows the number of parasites found with frequency of incidence. The helminths, "Ascaris lumbricoides" and "Enterobius vermicularis", were found in 46% and 19% of the positive specimens.

The protozoa, "Endomoeba coli" and "Giardia lamblia", were found in 42% and 40% respectively.

Table 3.

Table 3 presents the positive results classified according to age and race. The number of positive results in children outnumbers positive results in adults. The fact that the figures, for positive results in relation to the race of the patients harboring parasites are higher for white than for colored patients are not conclusive in that the total number of specimens could not be rechecked with regard to race.

We have gathered the impression that physicians are more likely to request stool examinations for parasites on white patients than on similar colored patients.

	Pathogens	"Giardia lamblia" (Pathogen?)	Non-pathogens	Total
Adults	27	21	47	95
White	20	15	25	60
Colored	4	5	19	28
No Record	3	1	3	7
Children	74	41	34	149
White	57	28	18	103
Colored	15	11	15	41
No Record	2	2	1	5
Total	101	62	81	144

TABLE 3. Positive stool specimens classified in relation to age and race of patients (1951-1956).

Table 4.

Table 4 presents the total and single number of specimens of scotch tape preparations for pinworm infection. 34 positive preparations were found in five years, or 13% of the individuals examined.

TABLE 5.

Table 5 presents the positive scotch tape preparations classified in relation to race and geographical location of patients. Since only 2 adults were found infected, they are omitted from the table.

DISCUSSION

Requests for stool examinations for intestinal parasites and requests for scotch tape preparation were based on the following:

a. Diarrhea (G.I. symptoms)
b. Detection of worms (by physicians or patients themselves)
c. Pruritus ani
d. Eosinophilia
e. Microcytic hypochromic anemia

Six cases harboring hookworm were found. One of these was of hookworm disease, three of hookworm infection. One case was a repeated examination a year later and in another case, only one hookworm egg was found. Examinations on this case were not repeated.

The seven cases positive for "Strongyloides stercoralis" had as a common reason for the examination requests, the presence of eosinophilia in the peripheral blood smear. All patients were admitted to the hospital for reasons other than parasitic infection.

The parasite, "Endamoeba histolytica," was found in a case of dysentery in an adult who was treated and apparently cured; the other case was one of a child with no symptoms referable to the parasite.

	1951-1952		1952-1953		1953-1954		1954-1955		1955-1956		Total	
Total Number Preparations	14		67		35		67		113		296	
Individuals Examined	13		53		33		59		100		258	
Positives (Number and Percentages)	4	30%	7	13%	1	3%	7	11.6%	15	15%	34	13%

TABLE 4. Results of five years of scotch tape smear examinations for pinworms. Percentages in relation to number of individuals examined.

Total Number Children	32
White	28
Colored	3
No Record	1
Richmond	14
State of Virginia	17
No Record	1

TABLE 5. Positive scotch tape smears in children, classified in relation to race and geographical location of patients (1951-1956).

From the tables presented, it is evident that pathogenic parasites are not a common occurrence in this State, "Ascaris lumbricoides" and "Enterobius vermicularis" being the most commonly encountered parasites. "Giardia lamblia", which is considered a pathogen by some, and the nonpathogenic "Endamoeba coli", are relatively frequent.

The low number of scotch tape preparations for the detection of pinworms is evident from table 4, as is the rise in number of examinations requested.

The appraisal of the more uncommon parasitic infections or disease cases showed the following:

The cases harboring "Trichostrongylus orientalis" and "Taenia saginata" did not present any symptoms referable to the parasites.

An interesting finding pertaining to the non-pathogen, "Trichomonas hominis", is that all cases were in the older age group. One patient was 41 years of age, and the others ranged in age from 62 to 71 years.

In reference to the laboratory aspect in the detection of parasites, it should be remarked that eggs of the plant parasite, "Heterodera radicola", may be mistaken by the unexperienced observer for eggs of hookworm. The similarity between hookworm and "Trichostrongylus orientalis" eggs is still greater, however, "Trichostrongylus orientalis" is a worm commonly found in the Orient.

Low grade infection by parasites in a healthy human is known not to produce obvious symptoms.

An interesting observation is the case of the 164 year old Colombian Indian, Javier Pereira. This individual, whose general health has amazed medical circles, had, according to laboratory examinations, an anemia due to intestinal parasites. He was found to harbor the parasites, "Endolimax nana",

"Trichuris trichuria", "Ascaris lumbricoides", and Hookworm.

SUMMARY

The results of five years (1951-1956) of stool and scotch tape preparations for intestinal parasites at the Medical College of Virginia Hospital Laboratories, with methods used, are presented. Data in regard to age, race, geographical location of patients and presenting symptoms are discussed.

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Safety of "Suntan Pills"

The usefulness and safety of the new "suntan pills" have not been definitely proved, according to a report by the American Medical Association's Committee on Cosmetics. In fact, there are many unanswered questions about the long range safety of the drug methoxsalen (Meloxine, Oxsoralen), according to a special committee report in the August 23 A.M.A. Journal.

Methoxsalen, also known as 8-methoxypsoralen or 8-MOP, is a compound that has been used for several years to treat vitiligo, a condition in which areas of the sin are unpigmented. By giving the drug, followed by exposure to ultra-violet rays, pigment formation is induced in vitiligo. However, the response of the skin is "erratic and unpredictable, and cosmetically satisfactory repigmentation can be obtained in only about one out of every seven patients treated."

Recently methoxsalen was suggested as a means of enhancing the tanning of normal skin and of reducing the skin's sensitivity to light. It is now available for these purposes in pill form on a prescription basis.

Most investigators agree that the drug helps enhance tanning of normal skin and increases tolerance to light in sun-sensitive persons. But to achieve this tolerance, there must be a delicate balance between dosage of drug and sun, the doctors said. If the person gets too much of either, he may have a violent reaction.

Present experience indicates that most healthy adults might safely take 10 to 20 milligrams of methoxsalen by mouth for one to two weeks. But its long term unsupervised use presents the following questions:

—Exactly how effective is the drug in increasing suntanning and tolerance to light?

—What will happen to the skin when courses of methoxsalen and sun exposure are repeated once or twice or oftener each year for many years and deeper than normal tan develops?

—Will it affect the incidence of skin cancer?

—Will the skin's aging process be delayed or accelerated?

—How will it affect persons with gastrointestinal disease, liver disease, or chronic infection?

In summary, an accompanying Journal editorial pointed out that any physician endorsing the use of methoxsalen for suntanning must realize that there are many unknowns, that there are dangers when many persons take an active drug for long periods without regular medical examination, and that the value of suntanning itself is questionable.

Ulcer Disease in Children

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IN THE PRACTICE of family medicine, children constitute the major group of patients. People have become more aware of the necessity of well-child care in addition to the treatment of injuries and sicknesses. The general practitioner will probably see half of his office practice devoted to children in the pediatric range—that is 16 years and under. Excluding the routine immunizations and well-child examinations, the largest percentage of complaints are either respiratory or abdominal. The respiratory diseases fluctuate seasonally, but the illnesses and upsets involving the abdominal area are rather constant in their occurrence and constitute probably the greatest field of uncertainty in the practice of general medicine.

There are many illnesses and upsets of children which have as their cardinal symptoms gastrointestinal pain, flatulence, nausea and vomiting, or some other troublesome disturbance of stomach and bowel. Most of these illnesses are minor in character and respond well to symptomatic treatment. Ascaris lumbricoides infestation is much more common than is usually suspected. We have found, in our area, that stool examinations have proven most helpful in diagnosing some obscure complaints.

When the medical, or shall we say nonsurgical, pediatric complaints are eliminated or treated, a small but significant group will demand careful differential diagnosis and frequently surgical consultation. Appendicitis is by far the most common major pathology of the juvenile gastrointestinal tract which brings the patient to surgery. This disease in children often runs a bizarre and equivocal course and wears various disguises which must constantly be guarded against to prevent mis-diagnosis.

Recently, we have had two cases admitted for treatment in which appendicitis had to be considered. Both patients presented a symptom complex suggestive of upper gastrointestinal pathology and, for lack of a clear cut indication for surgery, these children were scheduled for G. I. x-ray studies. In another reported case, appendicitis was not a factor in the diagnosis because of an earlier appendectomy. The fourth case was diagnosed originally as ulcer disease and x-rays were made to confirm the clinical impression.

The occurrence of, or rather diagnosis of, duodenal ulcers in children under 12 years of age is rare.[1] Therefore, I feel that the presentation of four proven cases in young people may help call attention to the possibility of ulcer disease in the differential diagnosis of abdominal conditions in children. One child was nine years of age, another twelve at the onset of symptoms. The third case is in the young adult group, being 17 years old, but is included because his symptoms complex rounds out the clinical presentation. The final case was in a 14 year old boy with typical ulcer disease history of two year's duration.

CASE REPORTS

No. 1: J.L., March 25, 1957.

A bright, alert and active nine year old girl had as her admitting symptom mid-epigastric pain which centered around the umbilicus and frequently radiated over the abdomen to the right side. The mother stated that the child had complained of pain in her abdomen intermittently for several months, often coming in from play and curling up in a chair where she would hold her abdomen and beg her mother to bring her something to eat. The child had been a poor eater most of her life but the mother was of the opinion that she ate as much as the other children and, in her words, "ate all day long rather than at meal time". Frequently, her episodes of pain followed carbonated drinks. At such times she complainted of flatulence and was given to rather embarrassing eructation of gas wherever she might be. Nausea was infrequent and the child did not vomit during attacks of pain. The child has had most of the usual childhood diseases. A short time prior to admission she had pyuria which responded well to treatment and, between her episodes of abdominal pain, she indulged in all of the usual activities of childhood and played about as well as the other children, but apparently tired somewhat more easily. The mother states that the child does not like to go to school because she dislikes her teacher but has always made satisfactory grades and progressed normally with her age group.

Presented at Meeting of Southwestern Virginia Medical Society, April 17, 1958.

Physical Examination revealed a well developed and well nourished white girl who appeared alert and active. She insisted that she had no pain and was not sick. The general physical examination was entirely negative with the exception of the abdomen. The patient could not relax the abdominal muscles although she felt entirely at ease with the examiner. There appeared to be some resistance, or suggestion of tenderness, over the right lower quadrant. The laboratory examinations were within normal limits. The patellar reflexes were hyperactive bilaterally. A spastic rectal sphincter made internal examination difficult but the rectum and lower bowel appeared to be perfectly normal.

Being unable to arrive at any definite conclusion as to the guilt or innocence of the appendix, the patient was scheduled for an upper gastrointestinal study. This revealed a small postbulbar duodenal ulcer with marked localized tenderness. The stomach almost completely emptied itself in one hour. The remainder of the small bowel appeared normal in outline with the head of the barium meal in the right colon on the one hour plate, indicating intestinal hypermotility.

The patient was discharged home on a fairly liberal bland diet and given Pro-Banthine, t.i.d.

The patient was seen at the end of six weeks and the mother reported that her complaints of epigastric pain had almost entirely ceased but did recur in a mild form when the patient became hungry. She had gained two pounds in weight since the hospital admission.

Re-examination, March 7, 1958, revealed a completely normal stomach and upper gastrointestinal tract. This girl had gained eight pounds since her previous admission and had been without symptoms for approximately six months. Although she still doesn't care particularly for school she is much better satisfied with her present teacher and seems to be doing fairly good work. It is interesting to speculate as to the possibility that this girl's fear and dislike for her teacher, in part, precipitated her original duodenal pathology. Her diet was liberalized and her Pro-Banthine was reduced with instructions to gradually cut down on the dose until it could be completely discontinued, possibly at the end of six weeks.

The obvious diagnosis in this case should have been made easily on the mother's statement of the child's relief of pain by food, and in an older individual would probably have received the diagnostic attention which it merited.

No. 2: R.C., March 19, 1958.

This thirteen year old girl was admitted to the hospital March 19, 1958, complaining of mild epigastric burning. She had nausea and vomiting but no diarrhea and no cramping. She stated that the pain had been present most of the time since midsummer and she recalls very clearly that on September 28, 1957, which was her thirteenth birthday, the pain bothered her almost all day. The child had no relief from eating and stated that sometimes the pain is present all day, but it never awakens her at night. She had her appendix removed at the age of six, tonsillectomy in January, 1957, and has been admitted to the hospital once before with mild epigastric pain but without a definite diagnosis having been made.

Physical examination revealed a patient 63½ inches tall and weighing 96 pounds. Her teeth were carious. Both ear drums showed evidence of old otitis. Urine examination was normal. The blood showed a moderate normocytic anemia. There was some resistance to pressure in the mid-epigastrium over the area of her pain. The x-ray examination revealed a normal esophagus and stomach and, on fluoroscopic examination, a tender area was palpable over the duodenal bulb. A small superficial duodenal ulcer was visible on the fluoroscopic screen and was apparent on the spot film. After one hour the meal was in the ascending colon and after two hours was in the mid-transverse colon, indicating definite hypermotility of the gastrointestinal tract. Careful questioning of both the mother and the patient failed to reveal any sign or symptom other than the burning pain in the mid-epigastrium and nausea and vomiting. There was no food relief and the patient denied discomfort from any type of food or drink. Without the x-ray evidence in this case a diagnosis could not have been made with certainty.

In retrospect, one is led to wonder if her appendectomy was for an acute appendicitis, or had her stomach and duodenum been hyperactive and painful most of her life.

At the end of two weeks a repeat examination revealed complete healing of the ulcer.

No. 3: O.T., October 31, 1957.

This seventeen year old white male had been seen as an outpatient for approximately six weeks. His chief complaint was sour stomach. For approximately four months he had had an uneasy sensation in his upper abdomen characterized by pain in the mid-epigastrium. After eating he complained of a

sensation of fullness and belching. Soon after eating he would get up small amounts of gastric contents which gave him a burning sensation which he described as heart burn. There was actually no vomiting. There was no relief from his discomfort by the ingestion of food; on the contrary his symptoms seemed to arise from a delay in emptying of the stomach. Similar attacks have occurred at intervals since he was 10 years old.

The mother stated that the boy had always been a high strung child; always became nervous and upset at the opening of school; and appeared to improve only with the beginning of the summer vacation. He had remained out of school several days because he was upset and nervous. Apparently his progress in school is rather slow.

One significant factor was the dress and appearance of the young man. His hair had been allowed to grow out into a long Elvis Presley type of hair cut. He was wearing tight flashy trousers, leather boots, highly decorated western shirt and leather jacket. Along with this he gave the impression of being a poorly adjusted apprehensive young man. His blood pressure was 118/84; pulse, 86. There were no deviations from normal except for a tenseness of the mid-epigastric area.

It was felt that this young man merited roentgenological examination of his upper gastrointestinal tract. The x-ray studies revealed considerable increase in the mucosal markings of the gastric antrum with marked pylorospasm. There was marked deformity of the duodenal bulb with what appeared to represent duodenal ulcer disease. After one hour there was a 40% retention of barium within the stomach which explained his feeling of fullness and distention.

The puzzling factor in this particular ulcer patient was the complete absence of classical food relief. All of his symptoms were directed toward gastric retention due to pylorospasm. During the past six months he has steadily improved on classical treatment.

No. 4: D.O., April 15, 1958.

The fourth case of duodenal disease was discovered on April 15, 1958, in a fourteen year old boy. This young man had suffered from pain in the abdomen for approximately two years. Each episode of pain lasted from two to three days and the patient recuperated rather slowly from each episode. His latest illness began four weeks prior to admission when he developed pain in the upper abdomen to the right of, and just above, the umbilicus. The mother stated that the pain always came on when he was hungry, that as soon as she gave him something to eat he obtained relief for an hour or two, and then the pain would return to its former intensity. This patient had never experienced vomiting with his attacks but had noticed some flatulence during the last two weeks.

The patient was 64 inches tall, weight 103. He had large cryptic tonsils and there was a small diffuse engorgement of his left breast which he said came and went at intervals. He had had the usual childhood diseases, no operations and, aside from myopia for which glasses were worn, there were no physical abnormalities. The patient had an impediment in his speech which was also noticeable in his mother. The boy appeared nervous and responded to questioning in a rather startled manner. His mother stated that he is in the fifth grade and is not doing very well in his school work. He exhibited a tenseness, or rather a resistance to pressure, in the right upper abdomen. An upper G. I. x-ray study was done on this boy. The examination revealed definite deformity of the duodenal bulb. At the end of one hour there was a significant degree of gastric retention. There was evidence of marked intestinal hypermotility with the head of the barium meal reaching the hepatic flexure of the colon.

CONCLUSION

Four patients, two girls, nine and thirteen, and two boys, fourteen and seventeen, were seen with a variety of abdominal symptoms. Investigation revealed duodenal ulcers in all. These cases differed in that the nine year old girl exhibited typical ulcer symptoms and, had she been 20 instead of 9, a diagnosis would have been made at the first office visit. The thirteen year old girl offered a more difficult problem since her symptoms were vague. She is a miniature of the adult patient so often seen with mild epigastric distress and vomiting without definite physical findings. The seventeen year old boy was an almost classical picture except for absence of food relief. His symptoms were all referable to his gastric retention rather than to the direct stimulation of the ulcer site. The fourteen year old boy had typical ulcer symptoms for two years with retention being the outstanding cause of complaint.

We may assume that ulcer disease in children runs the same course as in adults. There is the picture of pain, hypermotility, gastric retention, food relief, flatulence, nausea and vomiting.

It is, I think, well to emphasize the fact that in all of these cases of duodenal disease in children the

fluoroscopic examination proved of greater value in identifying the site than did the conventional plates. The use of a spot film device aids measurably in capturing the involved area at critical moments.

Fay K. Alexander, in 1951, stated that duodenal ulcer was not considered frequently enough in the differential diagnosis of gastrointestinal upsets or abdominal pain in children.[2] She reported 30 cases in 254 children seen in routine gastrointestinal tract studies. These ranged in age from 2 years to 14 years.

Lust found that roentgenologic signs of ulcers in children were the same as those seen in acute ulcers in adults.[3] He attaches more significance to the functional aspects of examination, and found patients with delayed gastric emptying as well as with hypermotility.

These authors are much more aware of ulcer disease in children than was Kennedy, in 1933, when he stated that such disease was uncommon in infants and children.[1] However, he wrote that the roentgen appearance of such disease in children was the same as in adults.

It is well to remember that ulcer disease may appear at any age. Symptoms and signs are exactly the same in children as in adults. Roentgen findings are identical but much more information can be gained from the fluoroscopic examination than from films. Response to treatment is excellent. If we are aware of the possibility of ulcer disease in children and keep it in mind, undoubtedly we will be able to diagnose many of these cases earlier and rehabilitate them more quickly.

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Health Insurance In Virginia

The number of people in Virginia covered by voluntary health insurance has reached a new high according to the Health Insurance Council. The Council estimates that over 1,931,000 persons in the state now are protected by some form of insurance designed to help pay hospital and doctor bills.

This figure is part of the continued growth of health insurance throughout the country, which was revealed in its 12th annual survey of the extent of voluntary health insurance coverage for 1957. The number of people covered by some form of health insurance in the nation, according to a Council estimate, is now 123,000,000, or 72% of the total U.S. civilian population.

The Council survey, based on reports of insurance programs of insurance companies, Blue Cross-Blue Shield and other health care plans, points out that the 1,931,000 persons covered by hospital expense insurance in Virginia as of December 31, 1957, surpasses the 1956 year-end total of 1,841,000.

The number of people with surgical expense insurance, which helps to defray the cost of physicians' charges for operations, climbed to 1,706,000 as compared to 1,312,000 in 1956.

Persons protected by regular medical expense insurance, providing for doctor visits for non-surgical care, rose to 959,000, compared to 850,000 the year before.

The Health Insurance Council, which is a federation of eight insurance associations representing over 90% of the accident and health insurance business handled by insurance companies, stated that this growth reflects the desire of the people of Virginia to help protect themselves against the cost of accident and illness.

Subacute Bacterial Endocarditis of a Patent Ductus Arteriosus

With Spontaneous Cure Prior to the Antibacterial Era

A Case Presentation

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A PATENT DUCTUS ARTERIOSUS is normal and absolutely essential to the life of the unborn child; however, if it persists beyond birth, it becomes immediately abnormal and presents complications to life in various manners. The most dreaded complication, prior to antibacterial therapy, and indeed even presently, is bacterial endocarditis situated within the patent ductus. The purpose of this presentation is to describe a case illustrating subacute bacterial endocarditis of a patent ductus prior to antibacterial drugs which with spontaneous obliteration of the ductus resulted in a cure.

CASE PRESENTATION

This 39-year old, white, married woman had a normal birth history. She was not a blue baby. At the age of two years, her local doctor informed her parents that she had a murmur due to "a hole in the heart with which she was born". There were no restrictions placed on her activity and she developed normally. She engaged in all forms of strenuous physical activity and played basketball while in High School. She would become somewhat short of breath only with severe exertion, but never recalls squatting or having to stop for very long before regaining her breath. She was never cyanotic. In June, 1936, at the age of 18, she began to lose weight, from her normal 110 pounds down to 89 pounds, and developed fever and generalized aching and soreness in all of her joints. She was put to bed at home for five weeks, during which time the joint symptoms and fever continued. She was admitted to a local hospital for a two week diagnostic study, at which time the diagnosis of subacute bacterial endocarditis, probably on the basis of aortic valvular disease, was made. She had two or three episodes of pleurisy following her discharge from the hospital, and with one of these in September, 1936, the left pleural space became filled with fluid. She was sent to a local sanitarium where she remained at bedrest for two months until the fluid has resorbed spontaneously. In November, 1936, she was admitted to the Johns Hopkins Hospital where her examination was summarized as follows:

"Physical examination showed a well nourished girl who did not look ill. No petechial spots were seen. There was a little dullness low in the left axilla, but breath sounds came through well. The heart seemed slightly enlarged to the left and the dullness extended definitely further to the left in the second and third interspaces than one normally finds. The second pulmonic sound was accentuated but the sounds were of good quality. A distinct systolic murmur was heard over all the heart, which in the pulmonic area became loud, rough, machinery-like, and extending into diastole. The spleen was not felt. Fingers were not clubbed.

"Laboratory examination showed a hemoglobin of 79%, with 4,000,000 red cells and a white count that ranged from 6,000 to 19,000. Urine was clear and at no time showed red cells. Blood pressure, 100/58. Wasserman, negative. Blood cultures showed consistently streptococcus viridans. Electrocardiogram essentially normal. Tuberculin test, negative with 1-10,000. X-ray of the chest showed slight enlargement of the heart, but definitely larger than in the plate from last spring, which she brought with her, and with particular accentuation of the pulmonary conus." The diagnosis at that time was subacute bacterial endocarditis of a patent ductus arteriosus and a fatal prognosis was given.

She came home from Johns Hopkins and continued bedrest at home for approximately five weeks, having no specific treatment. When the warm weather came in the spring of 1937, she went to live in the country with her aunt and every morning she was carried out on a blanket into the sun for three to four hours, during which time her temperature went up to 103° to 104°. She was then carried back to bed and with aspirin tablets and sponging the temperature was usually down by evening. She continued this daily routine for four months and the joints gradually improved and she started to sit up

The Greenbrier Clinic, White Sulphur Springs, West Virginia.

and move about. She also began to gain weight. She returned home and in two or three weeks was up walking about. She continued to have daily spikes of temperature to 101° or 102° for a few months, then even these subsided. She went back to school, finished her senior year, and graduated. In 1939 she was married and in 1941 she had a normal pregnancy and delivery. She had continued up to the present time without symptoms.

At the time of her examination at this Clinic in December, 1956, the chest x-rays showed a moderate amount of linear fibrosis in the left mid and lower lung fields, but the heart size was normal. Upon listening to the heart, there were absolutely no murmurs heard and the examination was completely within normal limits.

DISCUSSION

Ligation of the ductus arteriosus when patent was first proposed by Monro[1], in 1907. Though he never performed the operation, he suggested it for failure of the circulation. It remained for Gross and Hubbard[2] in 1939 to first report the successful ligation in a 7½-year old girl, with an uncomplicated patent ductus. The indications for their reported operation were beginning embarrassment to the circulation and to prevent the occurrence of subacute bacterial endocarditis. They warned against the operation in the presence of superimposed infection and stated that subacute bacterial endocarditis must be regard as a contraindication to operation. In 1940, however, Touroff and Vesell[3] reported at the annual meeting of the American Association for Thoracic Surgery the first cure of subacute bacterial endocarditis complicating patent ductus arteriosus by means of surgical ligation. Later, Touroff[4] reported five cases cured with only simple ligation and observed that within a few minutes blood, which had yielded profuse growth of streptococcus became sterile. It is now firmly accepted that simple ligation of the ductus alone cures the superimposed endocarditis.

There can be little doubt that this case represents subacute bacterial endocarditis, for it adequately fulfills the suggested diagnostic criteria of: persistent fever, valvular deformity, embolic and vascular lesions, and positive blood cultures[5]. The valvular deformity in this instance was represented by the patent ductus. Also there can be little doubt that a patent ductus arteriosus was present, as the typical, constant, machinery-like murmur was evident with an enlarging heart in a person known to have had a congenital cardiac deformity since infancy. More convincing, perhaps, is the permanent total disappearance of the continuous murmur and a return of the heart size to normal without surgical intervention, a situation that could occur only with occlusion of a patent ductus.

Gilchrist and Mercer[6] drew attention to the frequent occurrence of only a faint, non-specific murmur in these cases which with the fever, anemia, and weight loss, associated with the endocarditis, is altered and becomes obvious as machinery-like in character. In addition, the higher pressure in the aorta gives rise to a jet of blood into the pulmonary side of the ductus. Emboli detached from these fungating vegetations are shed into the pulmonary circuit producing lung infarcts as illustrated in this case, causing the episodes of pleurisy and free fluid in the chest. Peripheral infarcts are less common, occuring later in the disease and when massive, suggest extensive involvement of the pulmonary artery with spread of the inflammatory process up the wall of the ductus even to its aortic inlet. Such involvement, fortunately, did not occur in the described case, explaining the absence of peripheral embolization.

The appearance of a complete cure in this case, suggests obstruction of the patent ductus occurred as a result of thrombosis or embolization simulating the present day treatment with surgical ligation.

A case illustrating a patent ductus arteriosus with superimposed subacute bacterial endocarditis due to a streptococcus viridans, occurring prior to antibacterial therapy which underwent spontaneous cure apparently as a result of thrombosis of the ductus is presented. A brief discussion is offered.

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The Greenbrier Clinic
White Sulphur Springs, West Virginia

Pre-Paid Medical Care . . . .

Edited by
RICHARD J. ACKART, M.D.

Here in Virginia about 650,000 individuals are Blue Shield members. This is an impressive figure, but even after adding to it the number of persons who have adequate coverage of medical-surgical expenses through commercial insurance, there remain approximately three million Virginians whose potential sickness expenses are not properly provided for by prepayment. Realizing that a comparable situation exists in his State, Dr. J. Duffy Hancock of Kentucky recently addressed his colleagues through an article published by his Society's Journal and suggested what they might do about it. Because three million "uncovered" Virginians represent maybe one million potential votes for "socialized medicine", we also can profit by following Dr. Hancock's suggestions. He has kindly consented that his article might be reprinted here. His views and ideas undoubtedly have been tempered by his past experiences as President of the Kentucky State Medical Association and as President of the Southeastern Surgical Congress, and it should be known, too, that Dr. Hancock is currently President of the Kentucky Blue Shield Plan.

R. J. A.

The Price of Freedom[1]

J. DUFFY HANCOCK, M.D., F.A.C.S.
Louisville, Kentucky

The medical profession need not be and must not be the advocates of a lost cause. The forces of socialized medicine have not limited their efforts to one type of approach. It is possible that their foot is in the door with recent legislative measures. Certainly they have taken heart and indefatigably push this issue.

The threat posed by a vocal and powerful minority must be met head on. This minority is in a position to capitalize on existing dissatisfaction and to create further demand for medical control in a "welfare state". The threat is growing rather than subsiding. Voluntary prepayment plans must be constantly improved—guided—*and protected from abuse.*

The public has long recognized the necessity of prepayment plans which would enable them to budget for the necessarily increasing cost of health care. It is our part to successfully oppose those who contend that the only satisfactory solution is medicine paid for and controlled by the government. Many of our own profession and other earnest-minded Americans feel that basic freedoms are involved and that the voluntary system of medicine which has done so much for this country offers both the best and the most economical method of dispensing health care to our people. The battle lines are drawn . . . on one side, the advocates of an ever stronger central government . . . a small group attempting to gather to itself the powers and privileges of the many; to parcel them out in, at best, a dubious manner. On the other side, quite simply, are the advocates of individual freedom.

What is happening now? Let the record speak. Today, over 121 millions of persons have helped solve their surgical expense problem by private means. A leader in prepayment plans is Blue Shield. The widespread acceptance of Blue Shield means that the doctors are meeting the enemy head on, have found an answer both practical and workable.

The appeal of Blue Shield is evident in the concept that now pervades the thinking of the medical profession and of a large segment of the public. No longer is the doctor placed alone in the position of opposition to a "popular" cause. No longer is he fighting a "sacred cow". Today the doctor has arrived at a point most feared by the advocates of socialized medicine. He has criticized the theory of government control, found a plan to confound the opposition, and has proved this plan to be workable.

Now that we have demonstrated through Blue Shield the manner in which collective and free action

1. The Journal of the Kentucky Medical Association, May 1958, p. 462.

can handle the problem, we must go a step further. In the battle between privately-controlled prepayment for medical care and a government-controlled mechanism, we must think positively, not negatively. In very truth, we are engaged in a crusade. This crusade is a preventive action undertaken with zeal and enthusiasm. In the face of villification, we have carried on with earnestness and conviction. Because of our plan, Blue Shield, we have preserved factors that we might otherwise have lost; factors of great value. Not the least of these is the preservation of the vital doctor-patient relationship.

Blue Shield is your plan, Doctor. It is yours individually, and it is ours collectively. It is a cooperative effort sponsored by the medical profession to satisfy a public need and still retain in qualified hands the policy-making powers regulating medical practice. Where Blue Shield has entered the picture, nowhere have the rights of doctors been usurped. Nowhere has there been dictation as to how medicine is to be practiced. With Blue Shield, this need never be feared. The doctor not only has a voice in Blue Shield . . . the doctor *is* Blue Shield. We, the medical profession, conceived it, we set it in operation, and we have nurtured it over the years.

The battle has not been easy. The enemy does not give up easily. We have exploded his original issue that only the government could offer a workable mechanism. But, when a misguided group follows a target, rational issues are not needed. We must be on guard, at all times.

The public looks to the doctor for guidance. We are opinion-moulders. Through advocacy of Blue Shield, we can influence to the good. All that is needed is to let the public know that we, members of the medical profession, recognize Blue Shield as the only solution to the problem. Let the public know about the plan, and, more important, how you feel about it. And, talk not only to your patient, talk also to the other moulders of opinion, the businessmen, about Blue Shield. As businessmen, and as centers of influence, they are as vitally interested in this problem as you are.

History shows that when socialism comes in, it begins in the medical field, and spreads its tentacles elsewhere as rapidly as possible. This was the case in England, Switzerland, Sweden and Germany, and might well have been the case here. Let us unite our constant efforts to retain our traditional freedom. Our crusade has largely been successful so far. There is little or no doubt that the formation and growth of the companion Blue Cross and Blue Shield Plans prevented government control. Some happy optimist said of the British Empire that they never won any battle but the last. It would be fatal for us to assume this philosophy. Once the battle is lost in this essential controversy the war is irrevocably lost.

Best Time to Have Mumps

There is much less likelihood of infection after exposure to mumps than to measles or chickenpox. This "low order of communicability" probably accounts for the fact that so many adults escape the disease during childhood only to develop it in later years, Dr. Edward B. Shaw said in the August 2 Journal of the American Medical Association.

The best time for a person to have mumps is during childhood, when the possible complications are not very severe. In adulthood, mumps can be followed by serious—and sometimes lasting—complications. In order to prevent the possibility of severe adult infections, it might be desirable to deliberately expose a child to the disease, thus insuring lifelong immunity. However, this introduces the potential risk of secondarily exposing adults who may then have the illness with greater severity and sometimes permanent damage.

There is no really reliable and predictable means of artificially inducing immunity. The best means of acquiring lifelong immunity is to have mumps before puberty.

Dr. Shaw is clinical professor of pediatrics at the University of California Medical Center and chief of the communicable disease department at Children's Hospital, San Francisco.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Medical Profession Supports Public Health

A budget is financial planning and is important in arranging for the orderly conduct of affairs, be they individual, group, business, state or national. The budget sets forth what is needed in the way of housing, personnel, equipment, utilities, fixed charges, current charges, and services to be rendered with the cost of each. A budget, however, is of no value unless there be funds available, already in hand or in sight, to cover the anticipated expenditures. Such considerations are as necessary in planning the annual operation of a local health department as they are in planning the whole unit, a county or city government.

In the case of the local health department, there must be ample housing in a suitable neighborhood; the usual utilities of heat, light, and water; janitor service, transportation, and supplies are to be provided; and, above all, the services that the department will render are to be outlined, planned and arranged. It is in the provision for these services, the actual work of the department, that personnel in suitable number and of proper training to carry on the activities, are to be employed. This requires selection from a group that is limited by the very nature of its specialization.

In the case of the county health department, the local governing body receives much assistance from the State Department of Health, both in setting up the budget and in providing for the same by the grant of a large part of the funds that it calls for. For example, the budget of a county health department as it was recently planned by the State Health Department in cooperation with the local health director, called for the expenditure of a total of $27,014.00. This amount included the salaries of the director, two public health nurses, a sanitarian, and a clerk, with travel expenses for those who would need to travel in the performance of their duties. All other expenses including honoraria to clinicians, wages (such as janitor), contractual services, current charges, supplies and equipment were included in the $27,014.00. Of this total the county was asked to provide 30.896 per cent, or $8,346.25. The amount that they had paid the previous year was $807.00 less. The Board of Supervisors, in planning for the coming annual budget of the county, had arbitrarily announced that there would be no increase in salary for any county employee; this was without consideration of the fact that State employees are under the Merit System and are automatically entitled to increases within certain ranges for services that are satisfactory. The Board stated in a resolution that "those paid partly from local funds should be treated in a like manner in regard to salary increases."

The only reply that could be made to this statement was that a reduction in appropriation would call for a reduction in the services of the department; in other words, "the garment must be cut according to the length of the cloth." The proposed cut suggested to the Board was the elimination of one of the two public health nurses. In the same resolution referred to above, the County Board of Supervisors provided "that this Board request the State Health Department to maintain ____ County Health Department for the fiscal year 1958-1959 on the same basis as for the fiscal year 1957-1958 in regard to the employees, salaries of employees and number of employees and to grant no increases in salaries from County Funds for the period of time in the fiscal year 1958-1959 and to retain the nurses in the ____ County Health Department as they were for the fiscal year 1957-1958." They provided further "that if the above request is not complied with then all local fund appropriations to the State Department of Health for the maintenance and operation of the ____ County Health Department be cut off on July 1, 1958, and no further payments be made from the local funds for the fiscal year 1958-1959."

This resolution did not suit the County Medical Society and they addressed an appeal to the Supervisors to reconsider their appropriation for the Health Department. Moreover, members of the Society holding high office in this group, appeared at the meeting of the Board of Supervisors and told them that for five times the amount they had been asked to contribute they could not provide the services being rendered by the Health Department. They reminded the Supervisors that the transfer of a nurse to another county would suspend the free mass chest

x-ray clinics and would curtail home visits to crippled children and to tuberculosis victims. "There can be no doubt," these doctors stated, "that the general health of the county will decline." They offered to forego the honoraria that the physicians are now receiving for their services in the clinics but, realizing that these would not cover the deficit of $807.00, the Society offered to present the Board with their check in this amount to insure the operation of the ____ County Health Department at its present standard for the next year. One physician said, "I can give my services to a woman with an abnormal or a complicated pregnancy but I cannot afford to pay her hospital bill."

It is very heartening and gratifying to the State Department of Health to have the local Medical Society endorse so strongly the operations of the local Health Department and to express their willingness to take money out of their own pockets to keep it going at its prevailing standard, all of this without solicitation on the part of the local or State Health Department. The State Department of Health is ever conscious of the constant support that it receives from the practicing physicians, both as individuals and as groups, at the local level and at the State level, and realizes that its duties in the prevention of the spread of disease have been assigned to it by the people and by the physicians. It holds these obligations in high trust and acknowledges that its accomplishments would be few without the loyalty and support of the medical profession. It is stimulating to have this support given freely and voluntarily at the time that it is most needed.

Monthly Report of Bureau of Communicable Disease Control

	Aug. 1958	Aug. 1957	Jan.-Aug. 1958	Jan.-Aug. 1957
Brucellosis	0	1	13	18
Diphtheria	1	0	14	12
Hepatitis	26	42	189	328
Measles	470	110	21172	4719
Meningococcal Infec.	14	5	70	52
Meningitis (Other)	38	116	154	316
Poliomyelitis	33	27	59	53
Rabies (In Animals)	12	27	212	236
Rocky Mt. Spotted Fever	7	6	25	28
Streptococcal Infec.	443	324	5123	4874
Tularemia	3	4	28	23
Typhoid Fever	9	9	26	35

Blood Clot Dissolving Agent

A new agent that appears promising in the treatment of blood clots that move from one spot to another was described in a preliminary report in the August 2 Journal of the American Medical Association.

The agent is fibrinolysin (plasmin), a derivative of human blood. Given intravenously, it attacks and dissolves fibrin, the essential substance of a clot, without disturbing normal coagulation of blood. Fibrinolysin was given to 52 patients suffering from various types of thromboembolic disease—in which a vessel is blocked by a clot that has broken loose from its site of formation—by Dr. Kenneth M. Moser, Washington, D. C.

On the basis of his study, Dr. Moser said "one is justified in cautiously suggesting" that fibrinolysin may represent a major advance in the treatment of thromboembolic disease. However, firm conclusions cannot be drawn until large-scale, controlled studies have been conducted.

Fibrinolysin acts rapidly and causes few serious adverse effects. Almost half of the patients developed fever after receiving fibrinolysin, and two showed delayed skin eruption. Because of the danger of fever reaction, it cannot now be given safely to persons with coronary thrombosis.

In 18 patients with deep venous thrombophlebitis of the legs (in which clots occur in the deep veins), the results were "consistently encouraging." The patient's legs showed a loss of heat, tenderness, and size within 14 hours, and there was no recurrence of clotting. "Some beneficial effect" was noted in four of eight patients with pulmonary embolism (in which clots have moved into the lung area from other places). There was rapid relief of chest discomfort and an interruption in the course of "recurrent embolization" which had not responded to treatment with drugs that prevent coagulation.

Fourteen patients with blocking of the cerebral arteries received the agent. Seven showed some degree of improvement (return of speech and movement), although it was maintained in only four.

No conclusions can be drawn from these few cases about the value of fibrinolysin in "a process as unpredictable" as cerebral thrombotic disease, but they do suggest the safety of the treatment.

Mental Health . . . .

JESSIE MARSH ENSLIN, M.D.
A. B. CHAPMAN, Jr.

Survey Report of the Activity Interests of the Aging by the Danville Planning Committee on Resources for Older Persons

For good mental health it has long been recognized that aging persons need to have companionship, feel useful, somewhat independent, loved and needed, and enjoy activities from which they can gain the emotional satisfaction of achievement, common interests, and sometimes competition. Often such gratifications play a large part in the prevention of emotional or mental illnesses and in the recovery from them.

The opportunity for aging persons to stay happily and busily occupied makes for a much easier adjustment for all persons concerned in a two or three generation household.

A fuller recognition of the need for a program of activities became apparent when two depressed patients, who were being seen at the Clinic, complained of the paucity of interesting activities available in a moderate size community. One man of sixty-plus years lamented that he was just sitting around waiting to die because now that it is difficult for him to read, there is nothing else to occupy his time. His wife, to whom he referred as The Old Battle-Axe", was extremely rejecting, never wanted to be companionable, and accused him of feigning his physical pathological condition. He wished there were some place he could go to have a little peace from nagging and to just talk with someone.

The other patient, aged 49, who because of a severe psychophysiological condition, had found it extremely difficult to accept his retirement, was at a loss to fill his waking hours with interesting or stimulating activity because, outside of fishing occasionally when the weather was "right" for him, he could not find a hobby in which he was interested and which he could afford. Both of these men were of low economic brackets.

In recognition of the fact that opportunities should be provided to help this aging group have an enriched, stimulating, and happier life, during October 1957, a group of interested persons who are also associated with seventeen different local public and private agencies and churches held a series of meetings at the invitation of Dr. Jessie Marsh Enslin, Director of the Danville Clinic for Mental Hygiene, to plan a social and recreational program for citizens from fifty to seventy years of age.

From statements made at these meetings, it developed that the general consensus was that the need is quite evident, and that, while some effort is being made to meet it, it is of a limited nature, and in only a small degree are available community resources being used.

It was decided that before any definite organizational steps are taken, future participants should provide some information as to the range and degree of their interests in a fairly wide variety of activities. Further, there should be some knowledge as to the experience and previous participation in these activities in the past; and too, there should be some way of knowing what potential leadership there is among those who might take part in the programs which it is hoped will be provided. It was thought that with this information in hand a better job of planning could be undertaken and that more successful results would be assured.

The direct outgrowth of these meetings was the development of a survey to be submitted to a select group of persons in the age brackets of fifty and over. It was planned to survey both men and women of the white and Negro population.

A Sub-Committee was appointed to develop and distribute the survey questionnaire and to tabulate and report the findings. Forms were distributed to reach over three thousand persons. When completed they were to be sent back by return mail.

Approximately 10% of the questionnaires were returned. A significant number of persons indicated that they were shut-ins, uninterested, needed transportation to participate, or by written statements made it clear that they did not understand either the purpose of the Committee or of the survey.

The survey form listed activities which the Committee felt could be organized, if sufficient interest was shown, using available facilities and professional and volunteer leadership from cooperating agencies.

All activities were listed under five major headings. Individuals participating in the survey were requested to indicate in the proper column by check

mark, if they were interested, if they had experience in the activity, and if they could lead or direct the activity.

It is obvious in reviewing the overall responses that interests in Crafts, Social Activities, and in Personal Improvement predominate. The other areas surveyed were Arts and Collecting. These facts may well serve as a guide for the placement of emphasis in planning those activities which can be expected to offer the greater amount of participation and enjoyment by the greater number of persons. These facts may also be of help to agencies in working out their own programs for those whom they serve within this age grouping.

An appreciable number expressed willingness to lead or direct activities. After careful appraisal this leadership could be utilized.

From the survey it is quite apparent that there is great need for more human contact and meaningful inter-personal relationships with individuals of one's age group. This is brought out particularly in the Social and Personal Improvement categories.

The Ways and Means Committee is now busy preparing specific recommendations for the Planning Committee's action.

ENSLIN, JESSIE MARSH, M.D., *Director, Danville Clinic for Mental Hygiene, Danville, Chairman of Planning Committee.*

CHAPMAN, A. B., JR., *Chairman of Survey Committee.*

Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

Cause of Schizophrenia

A new avenue of investigation into possible chemical causes of the mental illness schizophrenia has been suggested by a Harvard Medical School researcher.

Dr. Samuel Bogoch has found that adult schizophrenics have considerably less neuraminic acid—a component of the brain's gray matter—in the spinal cord fluid than do nonschizophrenics. In fact, the levels of neuraminic acid in the cerebrospinal fluid of adult schizophrenics is "comparable only to values found in some children under seven years of age."

The low values in adult schizophrenic patients may indicate a form of chemical immaturity of the nervous system. This failure in chemical maturity would correlate well with clinical evidence of a failure of psychological maturity in the schizophrenic.

Writing in the Archives of Neurology and Psychiatry, published by the American Medical Association, Dr. Bogoch said that more studies must be performed before any definite conclusions can be drawn regarding the use of neuraminic acid levels for diagnosing schizophrenia.

There have been many attempts to show some chemical cause of schizophrenia through the study of blood and urine, but there has been no definite demonstration of a chemical disorder in the central nervous system proper.

He studied the neuraminic acid concentrations in the cerebrospinal fluid of 29 adult schizophrenic patients; 72 children under the age of seven years; 29 children between the ages of seven and 15, and 65 non-schizophrenic adults. He found that low values in adults correlated well with the diagnosis of schizophrenia, whether it be an acute first attack or a chronic process of more than 10 years duration.

The exact function of neuraminic acid in the nervous system is not definitely known. It appears to play some role in the functions of the "blood brain barrier," which helps maintain the special environment of the brain. He theorized that low neuraminic acid concentrations might affect the functioning of the barrier, which in turn could account for the brain's misfunctioning and the resulting psychotic state. Furthermore, it may not be necessary to seek specific chemicals as causal agents of schizophrenia. The "causal agents" may be normal substances produced by the body's physical and chemical process. These substances are usually prevented by the blood-brain barrier from coming into prolonged contact with the brain. However, if the barrier doesn't work correctly, the substances may contact the brain, interfering with its environment and producing mental illness. Then the possession of an inadequately developed barrier system would represent a "specific vulnerability to psychosis."

Dr. Bogoch believes that this hypothesis can be proved or disproved. In addition, he said that tests are now underway to determine the effect of the administration of neuraminic acid itself and of neuraminic-acid-containing substances to psychotic patients.

Dr. Bogoch is associated with the neurochemical research laboratory of the Massachusetts Mental Health Center, and the department of psychiatry, Harvard Medical School, Boston.

Current Currents

THE NEW HEADQUARTERS BUILDING of The Medical Society of Virginia will be dedicated on Sunday, October 12, at 4:00 P.M. and members and their guests are cordially invited to an open house which will immediately follow the brief ceremony. We know you will be proud of the new building which was designed with one thought in mind—service.

The easiest way to reach the new building from the Jefferson is to drive west on Main Street to the Boulevard. Turn left on the Boulevard and proceed two blocks to Idlewood Avenue. Turn right on Idlewood and proceed directly to the new building to 4205 Dover Road (Idlewood Avenue becomes Dover Road upon entering Windsor Farms).

THE VIRGINIA MEDICAL SERVICE ASSOCIATION will hold its annual meeting at the Jefferson on Monday, October 13. The meeting will be held in the Confederate Room and is scheduled for 4:00 P.M. A number of important matters will be discussed and members are urged to attend.

A NUMBER OF LUNCHEONS and special gatherings are scheduled in connection with the annual meeting, and all are listed in the official program. Since the preliminary list was published in the September issue of the Virginia Medical Monthly there has been one addition and one change. The Virginia Urological Society will hold a luncheon on Monday, October 13, in the Confederate Room beginning at 1:00 P.M. The meeting of the Sub-Committee on Rural Health has been changed from Dining Room "A" to the Valentine Room and will begin at 3:30 P.M.

PRESIDENT EISENHOWER recently signed into law a bill providing a limited amount of publicity for union-management welfare funds (including medical plans). At the same time, he criticized the legislation as being too weak and stated that it would be ineffective unless tightened up by the next Congress. Under the new law, the Funds are required to register with the Secretary of Labor and submit annual reports. The reports would be made available to beneficiaries.

Mr. Eisenhower declared that the act requires only summary statements which make it possible to conceal many abuses. He also stated that the bill's reliance solely upon individual employees to compel compliance through court proceedings is unrealistic. According to the President, "Employee suits alone are inadequate as inforcements remedies. Unaided by governmental authority to conduct investigations and institute litigation, individual employees, without financial resources or legal experience, can be easily intimidated, made subject to reprisals and discouraged from taking effective action."

THE SOCIAL SECURITY ACT has again been amended by the Congress. Actually, this is not unusual, since the same thing has been done every election year since 1950. This time, old age, survivors and disability benefits were increased by 7 per cent. This, of course, was in response to demands that benefits keep pace with the cost of living. It provided an additional $197 million for public assistance recipients, and gave states greater flexibility in the use of federal funds for financing medical care of the aged, blind, the disabled and dependent children.

To finance these liberalizations, the taxable base has been increased from $4,200 to $4,800 of gross employment earnings and raises the tax in 1959 from 2¼ per cent to 2½ per cent for employer and employee. The tax for the self-employed will be increased from 3⅜ per cent to 3¾ per cent. Additional increases are scheduled for 1960, 1963, 1966 and 1969. By 1969, the self-employed will be paying 6¾ per cent of earnings.

There is considerable speculation that the next Congress will consider bills designed to provide hospital and medical care for OASDI beneficiaries. The House Ways and Means Committee directed the administration to study the situation and report by next February on the possibilities for financing medical care for the aged, with particular emphasis on the practicability of increasing OASDI taxes and using the money to purchase health insurance on retirement. The AMA took a strong stand against using the social security system to provide such care, regarding as a beginning of national compulsory health insurance.

MEDICARE OFFICIALS foresee the possibility of a shutdown of the civilian phase of the program early in 1959. It is beginning to appear that the $72 million appropriated by Congress for the fiscal year will not be adequate, and it was agreed by Senate and House Conferees that the armed forces should not spend more than that amount. Some believe that perhaps Congress will change its mind and vote more funds after it convenes January 7.

STATUS OF JENKINS-KEOGH continues to be of interest to physicians. A bill passed the House late in July with very little opposition. However, it died in the Senate Finance Committee when the Treasury Department insisted that it would result in a large tax revenue loss. The AMA, together with the American Thrift Assembly, pressed hard for an enactment. A new effort will be made during the 86th Congress.

DID YOU KNOW that the average family doctor is a well established physician in his forties who treats about 26 patients a day and spends more than eight hours a day on home and office calls.

The Medical Society of Virginia . . . .

REPORTS FOR 1958 ANNUAL MEETING

Executive Secretary-Treasurer

To be progressive, an organization must move forward —advance, develop. It cannot and must not stand still. As we look back over the past twelve months, we can see new milestones which the Society has passed in its development—milestones which bear testimony to the untiring efforts of the officers who control its destiny.

There is no doubt but that we are living in an era dominated by one of man's most sinister enemies—inflation. Prices continue to rise while values continue to decline. Administrators are hard put to maintain an acceptable level of service without substituting red ink for black. During the past year, six more state medical societies increased their dues, and the national average climbed slightly over $55.00. It is with pride that we point to Virginia's dues of $25.00, which have remained unchanged since 1946.

The above facts are mentioned in order to better point out the goal of your state office staff. The staff has continued to seek the true "balance" which is the key to progress. In order to achieve this balance, it is necessary to develop the ability to correctly weigh the maximum in results against the most economical use of funds and personnel. Good, sound, economical management will continue to be the goal of your staff during the months ahead. Just how successful its efforts have been thus far can be determined by a close look at the auditor's report which will be published in the December issue of the Virginia Medical Monthly.

Although it is virtually impossible to cover every activity of the Society in a report of this kind, we do try each year to comment briefly on those activities which we believe are of basic interest.

COUNCIL: The regular mid-winter meeting of Council was held on February 12, and complete minutes may be found in the April issue of the Virginia Medical Monthly.

HOUSE OF DELEGATES: For the first time in the modern history of The Medical Society of Virginia, there was called a special meeting of its House of Delegates. The House met in Richmond at the Hotel Jefferson on Sunday, April 13, for the express purpose of charting the future course of the Society with reference to the Medicare program. Although the minutes were published in the July issue of the Monthly, it is well to report here that the House adopted a resolution directing that the Society should negotiate for the continuation of Medicare and that the negotiators attempt to secure an agreement based on insurance or indemnity principles.

COMMITTEES: During 1957-58, The Medical Society of Virginia had eleven standing and twenty-seven special committees—two less than last year. In an effort to streamline the committee structure somewhat, a number of committees, such as Tuberculosis, Cancer, and Heart, were combined into the Committee on Specific and Chronic Diseases. Forty-three committee meetings were held—twenty-five of them at the headquarters building. While this is a very encouraging figure, we have reason to believe that the facilities available in the new headquarters building will result in even greater committee activity.

COMPONENT SOCIETIES: Thirteen of the forty-seven component societies were visited during the year. The State Office arranged programs for seven of those.

MEMBERSHIP: There was no loss of momentum on the membership front, and it is gratifying to report that the 2,800 level has been reached. The membership story follows in detail:

Members reported August 31, 1957		2,711
New members	164	
Reinstated	1	
		165
Deaths	46	
Resignations	15	
Dropped	14	
		75
Increase		90
Total membership as of August 31, 1958		2,801

AMERICAN MEDICAL ASSOCIATION MEMBERSHIP: It now appears quite certain that The Medical Society of Virginia will not lose its third delegate to the AMA. Many members will remember the bitter disappointments of previous years when the society's efforts to secure 2,000 AMA members always seemed to fall just a little short. This year, however, The Medical Society of Virginia can count 2,024 members who belong to the AMA.

MEETINGS AND CONVENTIONS: The State Office was represented at both sessions of the AMA, AMA P. R. Institute, Medical Exhibitors Conference, Southeastern Regional Journal Conference, Regional Meeting of the Health Insurance Council, Annual Meeting of the Virginia Council on Health and Medical Care, and the Annual Meeting of the National Blue Shield Plans.

Sixteen meetings of allied organizations within the State were also attended. Staff members served on the committees of the AMA, Red Cross, and the Virginia Council on Health and Medical Care.

SPECIAL CONFERENCES: Two special conferences were arranged during the year. A special Senior Day Program was presented for senior medical students at the Medical College of Virginia, and an indoctrination program was presented in Falls Church for medical assistants in the northern area. The latter program was presented under the sponsorship, and with the cooperation of the Fairfax County Medical Society.

NEW HEADQUARTERS BUILDING: Although construction of the new headquarters building was the direct responsibility of the Headquarters Building Committee, staff members devoted many man hours (mostly off duty) to the job of sidewalk superintending. The membership can be sure

that every brick and stone was laid correctly and that only top quality materials were accepted.

Virginia Council on Health and Medical Care: The Society continued, both financially and otherwise, its support of the Virginia Council on Health and Medical Care. Forty-one requests for placement assistance were referred to the Council and at least four of that number are now practicing in Virginia communities.

Personnel: The Executive Secretary would like to take this opportunity to express his appreciation of the untiring efforts of Miss Watkins, Miss Tobin, and Mr. Smith. With their cooperation, it has been possible to maintain a small, but effective staff. Although it was necessary to employ occasional part-time assistance, the permanent staff of four was maintained without difficulty.

The Staff extends you a most cordial invitation to visit the new headquarters building and to learn firsthand just how the Society can serve you better. Service is the standard by which we measure progress.

Robert I. Howard
Executive Secretary-Treasurer

AMA Delegates

The House of Delegates of the American Medical Association met in San Francisco from June 23-27 and experienced one of its busiest sessions. Although over 60 resolutions were considered, your Delegates will only comment on those which hold special interest for Virginia physicians.

Perhaps it should be said that the free practice of medicine is at the crossroads and it is of the utmost importance that every physician concern himself with the issues which ultimately will decide the fate of American medicine.

The Medical Society of Virginia was greatly honored by the election of Dr. W. Linwood Ball, Richmond, to the office of Vice-President of the AMA. Those of us who have worked closely with Dr. Ball during the past several years know full well that AMA could not have made a better choice. He has our sincere congratulations and support.

Once again, the matters of medicine's relationship with the UMWA Welfare and Retirement Fund came in for much consideration. It was decided that, for all practical purposes, it would be wise to await the final report of the Committee on Medical Care Plans which will contain recommendations serving to clarify the relationship between the profession, the patient, and third parties. The Commission will very probably present its report to the House no later than this December.

The House did direct, however, that the AMA proceed immediately with a campaign designed to inform the public of its right to the free choice of physician.

The House reaffirmed its unequivocal opposition to the compulsory inclusion of self-employed physicians in the social security system. Attention was called to the fact that American physicians have stood always on the principle of security through personal initiative.

Once again, the House urged congressional action to restrict hospitalization to veterans in VA hospitals to those with service connected disabilities. It was pointed out that in 957 over $619 million was spent on hospitalized medical care of veterans in VA hospitals, and approximately 75% of those cared for had non-service connected disabilities. It was further recommended that AMA suggest to Dean's Committees that their activities be restricted to VA hospitals admitting only patients with service connected disabilities.

Medicare was not overlooked, and the House reaffirmed its basic contention that the Dependent Medical Care Act as enacted by Congress does not require fixed fee schedules. It was the opinion of the House that fixed fee schedules might ultimately disrupt the economics of medical practice.

A report on "Medical Use of Hypnosis" by the Council on Mental Health was approved by the House. The report stated that general practitioners, medical specialists and dentists might find hypnosis valuable as a therapeutic adjunct within the specific field of their professional competence. It was emphasized, however, that all those who use hypnosis need be aware of the complex nature of the phenomena involved. High level research on hypnosis was urged for physicians and dentists and its use for entertainment purposes was vigorously condemned.

The Board of Trustees was requested to survey and re-evaluate the functions and effectiveness of the AMA Legislative system, including the Washington Office, in the light of present day conditions. The Board was asked to implement, as rapidly as possible, all changes and additions that its survey discloses to be desirable.

The House was requested that any funds provided under the public assistance provisions of the social security act for medical care of the indigent be administered by a voluntary agency, such as Blue Shield, on a cost plus basis or by a specific agency established by the medical society of the state in which indigent care is rendered.

In addition to the above, the House directed the Board of Trustees to study problems pertaining to licensure by reciprocity;

Urged members of the House of Delegates to consider carefully the preliminary report of the Committee on Preparation for General Practice;

Expressed the opinion that some operating room experience is valuable and necessary training for nurses;

Approved an interprofessional code for physicians and attorneys and recommended that general hospitals, wherever feasible, be encouraged to permit the hospitalization of suitable psychiatric patients.

All members of the Medical Society are urged to read the detailed Actions of the House of Delegates as presented in the Journal of the American Medical Association. The resolutions and the Reference Committee action will give you a better idea of the thinking of these resolutions and actions.

Vincent W. Archer, M.D.

Medicare Advisory

The Medicare Advisory Committee has met on four occasions during the past year and has considered over 120 special cases referred to it either by the Department of the Army or the Fiscal Administrator. Many of these referrals result from the fact that questions are raised which call for special study and interpretation in the absence of pertinent directives.

Unfortunately, it is not always possible for the Committee to act on these referrals as quickly as it would like. Physicians concerned have been unusually coopera-

tive, and the Committee takes this opportunity to express its appreciation of their patience and understanding.

The Medicare program, at this time, is fighting for its very existence. The cost has been considerably more than originally anticipated, and is receiving careful study by the Congress. This Committee, however, will continue its efforts to guarantee the program a sound footing in Virginia.

W. Linwood Ball, M.D., *Chairman*
Fletcher J. Wright, Jr., M.D.
Guy W. Horsley, M.D.
Mason C. Andrews, M.D.

Judicial

The following amendments to the By-Laws have been proposed:

Article II

Section 1—Change Section 1 to read as follows:

"There shall be an annual assessment for each calendar year of $25.00 upon each active member who has been in active practice more than five years, payable in one or more installments before December 31st of that year. Those who have been in active practice for five years or less shall be assessed $15.00 for each calendar year. Dues for associate members shall be $7.00 for each calendar year. Dues shall be prorated on a monthly basis for those joining during the year. No dues are required of courtesy members."

(The purpose of this amendment is to provide a five year period immediately after a physician enters active practice during which his dues will not exceed $15.00.)

Article VII

Section 4—Change the first sentence of Section 4 to read as follows:

"The President shall fill any vacancy occurring between annual sessions in the Council, delegates to the American Medical Association, and standing committees, and such appointments shall be valid until the end of the next annual session, except that when the apportionment of delegates to the American Medical Association is increased the delegates and alternates selected to fill the new vacancies shall assume office immediately after their election and serve during that calendar year."

(Adoption of this amendment would permit the provisions of Section 4 to conform with similar provisions of the American Medical Association.)

J. Morrison Hutcheson, M.D., *Chairman*
Hugh G. Stokes, Jr., M.D.
W. Callier Salley, M.D.

Editorial Board

The circulation of the Virginia Medical Monthly has now reached 3216, an increase of 71 over the previous year.

The increased advertising matter has required more original articles in order that a proper balance may be maintained between ads and professional material. It is hoped that members of The Medical Society of Virginia will keep the Journal supplied with worthwhile articles on timely medical topics in even larger numbers than they have in the past.

The increased use of color in pharmaceutical ads has sometimes delayed the appearance of the Monthly for each additional color requires an extra run through the presses and this quickly becomes time consuming. It is hoped the members will take this into consideration whenever the Journal appears to be late in arriving.

The frequency with which articles, guest editorials and editorials in The Monthly have been abstracted and have appeared in other publications, both lay and professional, has been a source of pride to the Editorial Board.

The Virginia Medical Monthly has continued to operate at a slight profit but the actual figure will not be available until the end of the fiscal year.

Wyndham Blanton, M.D.
Ennion S. Williams, M.D.
Lewis H. Bosher, Jr., M.D.
E. Cato Drash, M.D.
Hugh H. Trout, Jr., M.D.
James L. Hamner, M.D.
Julian R. Beckwith, M.D.
A. Brownley Hodges, M.D.
Harry J. Warthen, M.D., *Chairman & Editor*

Medical Service

The activities of the Medical Service Committee for the year 1958 have been restricted almost entirely to the following items:

1. The question of possible abuses of major medical coverage and means to correct such abuses;
2. The problem of the aging population of this country and the medical care of aged and indigent;
3. The problem of increasing use of emergency rooms in hospitals and the standard of patient care given in these emergency rooms;
4. The increasing number of foreign educated physicians licensed in this State.

In addition to two full meetings of the entire Medical Service Committee, there were numerous informal conferences between members of the Committee and also Sub-Committees. The first formal meeting was held in Richmond on January 26, the second meeting was held in Newport News on June 15, at the Newport News Shipbuilding and Dry Dock Company, where Dr. Barnes Gillespie had arranged for a conducted tour.

The following resolutions are presented to the House of Delegates:

(1) Be It Resolved, that The Medical Society of Virginia lend its efforts to the passage of a second injury law.

(2) Be It Resolved, that The Medical Society of Virginia be notified that the Medical Service Committee advocates an Industrial Health Conference between members of the medical profession and the members of various industries in the State with the idea that such a health conference be sponsored by the medical profession and the members of various industries in the State.

(3) Be It Resolved, that the Sub-Committee on Prepaid Hospital and Medical Insurance be appointed as the Committee to which all questions concerning health insurance, complaints by insurance companies, doctors or patients, should be referred, and that in addition, that this Sub-Committee be empowered to consult with the Virginia Committee of the Health Insurance Council, for help and assistance in any of its prob-

lems, and further, that any problem or complaint may be referred to the Grievance Committee of a local medical society if this should be necessary. (As explanation for the above resolution, Dr. Ennion Williams has pointed out that the success or failure of the major medical coverage rests with the medical profession. That it is necessary that the insurance companies be billed by the physicians according to their usual fees, rather than the fee that the insurance company may pay.)

In addition to the above resolutions, the Committee has undertaken a study of hospital emergency room care and questionnaires have been sent to all hospitals in the State with the idea that all of this information can be correlated and possibly at a later date, definite suggestions for improving or standardizing emergency room care can be made to the hospitals or to the Virginia Hospital Association.

The Chairman would again like to thank all of the members of the Medical Service Committee and their subcommittees for their faithful work during the previous year. Mr. Howard and his staff are also to be thanked for making our meetings more worthwhile. The Chairman would also like to say that progress is being made along several lines and will continue to be made as long as the members of the Society are interested in the betterment of the care of the citizens of our State.

Marcellus A. Johnson, III, M.D.
James P. Williams, M.D.
Arthur Van Name, Jr., M.D.
Richard E. Palmer, M.D.
William Johns, M.D.
Charles H. Lupton, M.D.
Charles L. Savage, M.D.
Snowden C. Hall, Jr., M.D.
H. B. Holsinger, M.D.
Russell Buxton, M.D., *Chairman*

House

The following report of the House consists chiefly of expenses incurred at the former headquarters building at 1105 West Franklin Street but two items concern expenses incident to the operation of the new headquarters at 4205 Dover Road in Windsor Farms.

Building Maintenance for 1957-58 was as follows:

Janitor and Supplies		$1,203.54
Plumbing & Electrical Repairs		91.89
Utilities		374.44
Taxes		
1105 West Franklin Street	$464.36	
4205 Dover Road	156.79	621.15
Insurance		110.89
Furnace Repairs		15.75
Fuel Oil		
1105 West Franklin	$402.52	
4205 Dover Road	133.00	535.52
Total		$2,953.18

The current budget provided for $2,100.00 for building maintenance and $500.00 for building repairs.

The $353.18 by which the budget was exceeded was more than compensated for by the $1,320.00 which was contributed toward the upkeep of the headquarters building by the three organizations that use the second and third floors.

Fletcher Wright, M.D.
Donald S. Daniels, M.D.
H. J. Warthen, M.D., *Chairman*

Scientific Exhibits and Clinics

Twenty-five top flight exhibits will be an outstanding feature of the 1958 Annual Meeting of the Medical Society. The exhibits will be located on the mezzanine of the Hotel Jefferson and will be easily accessible to all.

The excellent booth arrangement was worked out with the cooperation of representatives of ADD, Incorporated, Cleveland, who made a special visit to Richmond in order to make sure that the available space will be utilized to maximum advantage.

Once again, awards will be presented for (1) exhibits prepared by institutions and (2) exhibits developed by individual physicians.

The physicians responsible for these exhibits have spent a great deal of time and effort in their preparation. They are presented for your benefit and your Committee urges that you spend as much time among them as possible.

Frank M. Blanton, M.D., *Chairman*
Alvin C. Wyman, M.D.
Andrew F. Giesen, M.D.

Ethics

The Ethics Committee had three matters referred to it during the year and is pleased to report that all were handled satisfactorily.

As the practice of medicine becomes more and more complex, and as the profession girds itself for a last ditch battle to preserve its freedom, it is not difficult to understand why questions concerning medical ethics can be expected to arise often in the months ahead. It is for this reason that this committee is sponsoring in the Virginia Medical Monthly a section by section breakdown of the Principles of Medical Ethics as adopted by the AMA.

This committee also strongly urges the membership to study the excellent report of the committee on principles and policies as published in this issue of the Monthly.

Russell G. McAllister, M.D., *Chairman*
Robert P. Trice, M.D.
Harold W. Miller, M.D.

Mediation

No formal meetings of the Mediation Committee were held during 1957-58. The Chairman did, however, confer with the Executive Secretary on three occasions in order to discuss technical procedures.

Your Committee is pleased that, from all indications, grievance committees of component societies are handling all matters referred to them in a manner satisfactory to all concerned.

James L. Haviner, M.D., *Chairman*
Vincent W. Archer, M.D.
Carrington Williams, M.D.
James P. King, M.D.
James D. Hagood, M.D.

Membership

No matters have been brought to the attention of your Committee on Membership during 1957-58, and as a result, no meetings of the Committee were held.

The Committee calls your attention to the growth of the Society as reported by the Executive Secretary. We extend our many new members a most cordial welcome and trust that the Society will serve them well during the coming years. The names of these members have been published in the Virginia Medical Monthly each month, and we shall not, therefore, repeat them at this time.

The Committee takes particular pleasure in nominating our retiring President, Dr. Harry C. Bates, Jr., for honorary membership in The Medical Society of Virginia. His record has been outstanding and he deserves a hearty and sincere "well done".

Acors W. Thompson, M.D., *Chairman*
Cecil B. Dixon, M.D.
William Grossman, M.D.

Public Relations

The public relations program during 1957-58 might very well be described as a blend of the old and the new. Although your PR Committee concentrated on those projects which have proven themselves over the past few years, it also pioneered a number of projects which looked unusually promising.

The Committee, for the first time, sponsored a "Senior Day" program for senior medical students. The program was presented for students of the Medical College of Virginia and, from all indications, was very well received. Among the subjects covered were the art of the practice of medicine and the doctors responsibility to his community. It is hoped that such programs can be presented each year.

A new medical communication service, featuring exhibits on film, was originated during the year by one of the nation's largest pharmaceutical houses, and the Public Relations Committee agreed to act as the Virginia distributor. These film strips make excellent programs for component medical societies and feature many of the outstanding exhibits as they appeared at such meetings as the AMA, etc. Each film strip is accompanied by its own microgroove record and showing time is 20-minutes. The Committee has a number of excellent films available and they can be obtained any time merely by contacting the state office.

An excellent indoctrination course for medical assistants was sponsored by the Fairfax County Medical Society with the Committee's cooperation. Approximately 150 assistants attended the four-hour session and the Committee hopes other component societies will follow the lead of our northern members.

Your Committee has continued to work closely with radio stations in Virginia and is pleased to report that 1,274 programs have been presented thus far. Twenty-two stations, ranging all the way from Big Stone Gap to Suffolk, are carrying our programs at this time.

Although the demand for literature was not as heavy this year as in the past, the state office still sent out over 500 pieces.

Once again, the Committee would like to commend the Society's Committee on Rural Health for its interest in the 4-H Club Health Awards. Dr. James R. York, Berryville, attended the 4-H Club Health presentation ceremony at V.P.I. and presented a number of awards sponsored by The Medical Society of Virginia. The Committee on Rural Health is doing much to further the cause of public relations.

The AMA requested your Committee to review several films which had been produced by the Iowa State Medical Society and shown to TV viewers in that area. The films were scientific in nature, but presented in such a manner that the lay public could follow them without difficulty. After reviewing the films, the Committee recommended them highly to the AMA with the hope that a series will be purchased for distribution to the various states.

Your Chairman and the Executive Secretary once again attended the AMA PR Institute in Chicago and were again disappointed that Virginia was not represented by a larger delegation. Good public relations begins right at home and no committee can do a job quite so well as those who are "on the scene" every day. This Committee recommends that The Medical Society of Virginia urge each component medical society to send at least one representative to the AMA PR Institute in 1959.

John Wyatt Davis, Jr., M.D., *Chairman*
Mason C. Andrews, M.D., *Vice-Chairman*
Ira L. Hancock, M.D.
Thomas E. Haggerty, M.D.
William H. Barney, M.D.
Thomas W. Murrell, Jr., M.D.

Advisory to Woman's Auxiliary

It has been my privilege to serve as Chairman of the Advisory Committee for the Woman's Auxiliary during the past year. It is my pleasure to report that there are now twenty-two auxiliaries in Virginia and the total membership is eleven hundred and eighty-six.

The women are particularly interested in Public Relations, Civil Defense, Mental Health, Recruitment for Allied Medical Careers, Legislation and Safety. They are more than willing to assist the medical societies of the state however needed. As Dr. David B. Allman, the immediate past-president of the American Medical Association, stated, "A closer relationship with the Woman's Auxiliary is an advantage to the Medical Society."

C. M. McCoy, M.D., *Chairman*
Fletcher J. Wright, Jr., M.D.
Reverdy H. Jones, Jr., M.D.

Liaison to Confer with U.M.W. Welfare Fund

In September of 1957 a special committee of the Liaison Committee met in Norton to confer with the staff of a hospital and the Area Medical Director of the UMWA over removal of a hospital from treating UMWA cases. A hearing was held for two days and final decision was reached that the hospital should audit its reports and the Area Medical Director would consider reinstating the hospital provided the reports were more documental. The committee has not heard from either side of this case since decision was given but it feels that it has shown the Medical Society was doing its part in helping to clear up a dispute between a local hospital and the UMWA Fund.

In the past year the Liaison Committee had a meeting with the Area Medical Director and the three delegates to the A.M.A. to discuss the guiding principles put out by the House of Delegates of the A.M.A. at their meeting in New York and Philadelphia. During a thorough dis-

cussion of these principles, we agreed on all matters except the one concerning free choice of physicians. This, we think, can be worked out with the Area Medical Director at a later date and after a decision has come out of the House of Delegates of the A.M.A. which is to be given out in December of 1958. There is a special committee of the A.M.A. investigating the action of the Welfare Fund in the eleven states in which it operates and the committee feels after this decision is given we will be able to work out a workable agreement with the Area Medical Director.

The committee feels that most of the disputes which come up with the Fund can be settled on a state basis and we have had very satisfactory talks with the Area Medical Director, as the type of medicine in Southwest Virginia has improved since the Welfare Fund was established in 1947.

At the present, due to economic conditions of the coal business, the Fund in the fiscal year of 1957 and 1958 has reduced the amount of money allowed for medical care in this area 14% based on the amount spent the previous fiscal year. Starting with the incoming fiscal year, there has been another curtailment in order to meet present obligations.

During the past year there was some dispute by a physician in the western part of the state as to the Fund paying for drugs for their constituents. The committee had been informed by the Area Medical Director that certain types of drugs that were a hardship for the patient to buy would be furnished by the Fund through a local drug store where they could make this arrangement. Drugs were to be furnished for the following conditions:

Bronchial asthma and other similar conditions requiring antigen therapy
Bronchiectasis
Cardiac failure
Cirrhosis of liver
Coronary thrombosis
Diabetes Mellitis
Duodenal ulcer
Epilepsy, Grand Mal and Petit Mal
Malignant Hypertension and cardiovascular disease
Malignant tumors
Paraplegia
Pernicious anemia
Pneumoconiosis
Rheumatic fever
Rheumatoid arthritis
Silicosis
Thyroid deficiency

In the future we feel any dispute that comes up by the local physicians with the Fund should be handled through our committee.

In the meeting of the House of Delegates in San Francisco in June, the State of Colorado presented a resolution which was passed for the education of the public as to the Fund benefits over the way the Fund is being handled. Since the dispute over the free choice of physicians has not been fully settled, they wish to educate the public on the actions of the Welfare Fund throughout the United States.

In Virginia during the past year our workings with the Area Medical Director have been very satisfactory and we feel that any type of dispute that comes up can be best handled by our state committee without the local committees as county committees tend to become too personalized.

We hope our good relationships will continue with the Area Medical Director.

James P. Williams, M.D., *Chairman*
Thomas Hunter, M.D.
Mack I. Shanholtz, M.D.
John O. Boyd, M.D.
William B. Barton, M.D.
Rufus Brittain, M.D.
William F. Maloney, M.D.
Kinloch Nelson, M.D.

National Emergency Medical Service

Although no meeting of committee has been called during the past year, there has been more activity than in any previous period. The various members of the committee have been called upon for recommendations and advice. Since the chairman of this committee is also the Chief, Health and Special Weapons Defense of the State Office of Civil Defense, there has of necessity been an overlapping of duties. It is felt that a report on the medical preparedness of the State for disaster, either natural or enemy incited, would be in order.

There are at present approximately 120 First Aid Stations in the State, most of them located at strategic points. However, it will be necessary to obtain more such stations if we are to be prepared to take care of casualties among evacuees from target areas or to care for victims of such disasters as fire, floods or hurricanes.

There are seven pre-positioned 200-bed emergency hospitals located at Richmond, Charlottesville, Roanoke, Winchester, Fredericksburg, Franklin, and Manassas. Five more such hospitals are stored at Cheatham Naval Supply Annex at Yorktown and seven more at the Richmond Quartermaster Depot. A request is being prepared to preposition an additional number of these hospitals in evacuee reception areas. In the past two years these hospitals have been on display in Richmond, Roanoke, Norfolk, Danville and Fort Monroe. There are, at the present time eleven hospital cadres of the principal staff members, ready to form the complete staff when necessary. In addition arrangements are being carried out to tie in local hospitals with state colleges to form a so-called hospital center. These are capable of caring for approximately 2000 patients each, with addition of extra medical and nursing personnel. An example of such centers is the Rockingham Memorial Hospital and Madison College in Harrisonburg.

Training is continuous in Red Cross First Aid classes, Nursing Care of Mass Casualties, Radiological Monitoring, and the Care of Mass Casualties for physicians. We have endeavored to have local medical societies devote certain meetings each year to the Care of Mass Casualties. The response of the local societies has not been too good. Cooperation of individual physicians has been much better.

Additional medical supplies, other than emergency hospitals, are stored at Cheatham Naval Supply Annex, Richmond Quartermaster Depot, Veteran's Administration Hospital, and by the State.

The State has tentatively been divided into five regions which will effectively decentralize the medical preparedness effort, as well as make control easier in case of

disaster. While this is tentative now, depending upon action of the Congress, it is hoped this can be effected in the near future. A physician, nurse and advisory sanitarian have been appointed to assist the regional coordinator when he is appointed.

The committee feels that much has been done, but there still remains much more to be done before we can say we are fully prepared.

E. Cato Drash, M.D.
James L. Hamner, M.D.
Alexander McCausland, M.D.
Charles R. Riley, M.D.
Thomas Smith, M.D.
W. Ross Southward, Jr., M.D., *Chairman*

National Legislative

The composition of the Committee is that the Councillor for each District is on the Committee. Almost all committee work is carried on through these committeemen. The Chairman of the Committee, chosen by the State Society President, acts as liaison officer between the Legislative Committee of the American Medical Association and the State Society. When matters of national legislative interest arise, the Committee Chairman is contacted by the A.M.A., and he in turn communicates with the Councillors. These men know their representatives in Congress or know the people who should contact these congressmen.

During the past year several legislative matters have come up demanding the attention of this committee. Specifically the Forand Bill to markedly expand Social Security to the over-65 group, and cutting of the appropriation for Medicare.

The Chairman of this Committee wishes to take this opportunity to publicly thank the members of the Committee for their invaluable work during the past year. The thanks of the entire committee are due Mr. Robert Howard and his efficient staff for immediately contacting committee members when the "blue chips" were down and immediate action was necessary.

Vincent W. Archer, M.D., *Chairman*

Principles and Policies

The Committee on Principles and Policies met repeatedly during the year. A free exchange of opinions, and frequent rewriting, resulted in the submission of the following resolution—which the Committee recommends be adopted to guide The Medical Society of Virginia in its deliberations.

We reiterate the fundamental principles which the profession of medicine has always accepted and by accepting has gained the confidence and respect of humanity. From the Hippocratic Oath to the most recent revision of the Principles of Ethics of the American Medical Association and the opinions and reports of its Judicial Council, through the teachings of medical philosophers down through the ages, the same basic principles have survived. Cultural, social, and economic attitudes have altered details of application but the principles are basic and unchanged.

As stated in the preamble of the recent revision of the Principles of Medical Ethics, "These principles are intended to aid physicians individually and collectively in maintaining a high level of ethical conduct. They are not laws but standards by which a physician may determine the propriety of his conduct in his relationship with patients, with colleagues, with members of allied professions, and with the public."

We are firmly convinced that the survival of the medical profession as a group of dedicated individuals, free to serve without limitation except as imposed by the available scientific knowledge and art of application, depends completely upon the adherence and conformance of the medical profession individually and collectively to those basic and fundamental principles.

In accord with those principles there are certain privileges and obligations which may be enumerated.

First, of the physician himself:

1. The right of the patient to the free choice of the physician who attends him.

2. The freedom of the attending physician to treat his patient in accordance with currently accepted procedures, and without interference by a third party.

3. The right to charge a fee for services consistent with the service rendered, the skill and capability of the physician, the time and effort required, and the capacity of the patient to pay.

4. The obligation of a good citizen to his community and his colleagues.

5. The duty to support, to consult with, to aid, advise, and teach other members of his profession.

6. The right of each duly licensed member of the medical profession to be considered capable of rendering medical services in accordance with law and local practice, unless otherwise determined by his peers.

In willing and cheerful return for the rights and privileges granted to the profession as a whole and to its members each individual has an obligation to:

1. Render good, efficient, and honest services to his patients and their families in conformance with policies accepted in his own community.

2. Charge fees for services rendered which are reasonable and in accord with the patient's capacity to pay, and to willingly explain the fees charged and the reasons therefor.

3. To assist any person in an emergency to obtain needed medical attention, regardless of the ability to pay, and if medical services are personally rendered, to continue such services until the family physician is available or until adequate time and opportunity is afforded to secure replacement.

4. To grasp every available opportunity to read, study, and attend meetings and seminars to maintain and improve his competence in the art and science of medicine.

5. To secure consultation or assistance, or to refer the patient to a more capable or better trained physician, when the character of the illness or the complications of the case indicate the need of assistance or his lack of capacity in that particular case.

6. To secure consultation or make referral on the basis of ability and capacity rather than because of friendship or the expectation of reciprocated favors.

7. To refrain from the splitting of fees in any guise, and to confine his income from the practice of his profession solely to fees for services actually rendered.

8. To contribute to his community as a good and active citizen, participating in every worthwhile community

enterprise to the extent permitted by the needs and demands of his patients.

9. To participate regularly and actively in the local, state, and national organizations representative of his profession.

As the individual member of the medical profession has privileges and obligations, so have the organizations of individuals, the medical societies. Chief among them are:

1. To examine carefully and critically the training, capability, character and practice of applicants for membership and of its members, for the assurance that they are capable of and are delivering the type and character of service the public has a right to expect and believes it receives from those accepted into membership in official medical organizations.

2. To investigate and determine abuses in the practice of medicine, and of violations of accepted principles of medical practice or of ethics, and to discipline proven violators by appropriate action taken without fee or favor.

3. To study and investigate proposals for new and untried forms of medical practice based on changes in social or political concepts, and when those proposals fail, to conform to the basic accepted principles of policy and medical ethics to withhold approval and discipline violators.

4. To study and investigate proposals for the medical care of indigents, whether by private or public agency, in order to assure that regardless of the source of financial support, local control and direction is retained.

5. To perfect arrangements whereby emergency, night, holiday, and week-end medical services are available when required.

To attain the implementation of the preceding principles and policies, it is recommended that:

1. Wide publicity he given the principles and policies as adopted, first, through the Virginia Medical Monthly and the sending of reprints to each physician licensed to practice in Virginia, and later, through the various media for public information.

2. Appropriate committees be appointed to (a) rule on questions of principles and policies as they arise and (b) to investigate and recommend appropriate action when violations are determined. The State Medical Society Committee should consist of not less than eight (8) members appointed by the president of the Society.

3. It is further recommended, that local committees on the principles and policies of the medical profession be established in each constituent society.

4. Further to make effective these recommendations, that the activities and functions of the Mediation and Ethics Committees be evaluated and clarified.

5. That these principles and policies be written into the constitution of The Medical Society of Virginia and that the Judicial Committee be instructed to accomplish that effort.

6. That study be made of the feasibility of incorporating these principles and policies into the Medical Practice Act that the sanction of law may give weight and add authority to enforcement.

John T. T. Hundley, M.D., *Chairman*

Conservation of Hearing

Reports from the members of the Committee on the Conservation of Hearing indicate a continued interest and growth of the many programs throughout the State dealing with hearing and speech problems. However, as one surveys various units and areas in which active programs exist, it is obvious that there is a general lack of uniformity in the sponsoring groups, organization, personnel, goal and financing of the separate projects. This aspect is not difficult to understand if one becomes thoroughly familiar with the history and development of the hearing and speech programs with their many allied needs.

In general, problems related to impaired hearing are receiving the greatest degree of attention throughout the State. This is noted in the increasing number of hearing surveys that are carried out in the young school age groups (past committee reports—Charlottesville; University of Virginia Survey, Richmond; Junior League Survey, Norfolk; City School Board). Unlike the State Commission for the Blind, there is no such commission for the speech or hearing problems. Too, the need for services to those handicapped in hearing and speech, varies a great deal in relation to the population area involved, introducing many problems. Therapy or training is not always readily accessible to those who reside in remote regions because of the marked lack of trained teachers in this field.

The problem of financing and education of the public and physicians in this special area is a most important one. In this connection, the committee wishes to take special recognition, with gratitude, of the many non-salaried workers who have given so much of their time, interest and effort in behalf of the speech and hearing handicapped. Special mention is in order for the services and financial aid rendered by the Virginia Society for Crippled Children and Adults, Inc., The Virginia Hearing Foundation, Charlottesville, Lynchburg Speech and Hearing Center, Inc., Bristol Hearing and Speech Center, Medical College of Virginia Hearing and Speech Center, the Richmond Junior League Speech Center, and many other loyal individual and active supporters.

The developments improving the status of the handicapped hearing and speech person in the last few years are most encouraging. These consist in the repair of defective ear drums, more adequate surgical procedures for removal of disease in the mastoid cells and middle ear, and improved techniques in reaching and treating in selected cases, the immobilized stapes due to the scarring of past disease and in otosclerosis without severe nerve or bone involvement. These, plus improved techniques for teaching the hard of hearing and speech defectives are all most encouraging. Physicians having a special interest or problems of the above mentioned or similar should feel free to contact the otologist of their choice or any member of the committee for assistance.

Cal T. Burton, M.D.
Neil Callahan, M.D.
James Gorman, M.D.
W. Copley McLean, M.D.
John G. Sellers, M.D.
Fletcher Woodward, M.D.
P. N. Pastore, M.D., *Chairman*

Insurance

The Insurance Committee held two meetings during the

year. The first was held in Roanoke and the second at Society Headquarters in Richmond.

Much of its first meeting was devoted to a review of the Society's professional liability program. It is good to report that the program has made considerable progress during 1957-58 and is now firmly established. Nearly 800 members of the Society are now covered under the program and the experience has been good.

The Committee found, from a statewide survey, that by far the majority of the membership was interested in a group major hospital plan of some type. Similar interest was expressed in a group business overhead program. Consequently, your Committee gave considerable time to the consideration of major hospital and business overhead proposals.

The business overhead plan would go into effect on the 15th day of illness and would cover all recognized business expenses. The premiums seem reasonable and your Committee believes that such a plan would make an excellent supplement to a member's sickness and accident coverage. It is recommended, therefore, that The Medical Society of Virginia accept the business overhead proposal as submitted by the American Casualty Company through Mr. David Dyer of Roanoke.

With reference to major hospital coverage, the Committee studied two proposals quite carefully. One was submitted by the American Casualty Company and the other by Blue Cross. The Committee compared such features as eligibility, coverage for mental illness, nursing care, maternity care, cost, outpatient care, extent of coverage, etc. As might be expected, the two proposals were both excellent and had much to offer. Committee members were particularly impressed by the fact that the Blue Cross plan was available to all members of the Society regardless of age, health or marital status. They were equally enthusiastic concerning the amount of nursing care covered under the commercial plan (75% of the expense actually incurred for services of graduate or licensed nurse rendered in hospital).

The Committee was, therefore, faced with a most perplexing problem. It had, on one hand, a plan proposed by the American Casualty Company which seemed to appeal more to the average physician. On the other hand, the plan proposed by Blue Cross would provide coverage for the physician who needs it most—the physician over age 70.

Your Committee believes that a state medical society must act in the best interest of *all* of its members. Whether, however, the age protection feature of the Blue Cross plan outweighs what appears to be the more acceptable feature of the commercial plan is the question which must be decided.

It is with this thought in mind that the Insurance Committee respectfully submits its findings to the Council of The Medical Society of Virginia with the request that careful consideration he given to the benefits involved.

James L. Chitwood, M.D., *Chairman*
Andrew Giesen, M.D.
W. D. Lewis, M.D.
Guy W. Horsley, M.D.
J. R. B. Hutchinson, M. D.
Louis P. Bailey, M.D.

Mental Hygiene

Two meetings of the Mental Hygiene Committee were held, the first in April and the second in July.

Shortly after the appointment of the Mental Hygiene Committee in October, 1957, the chairman attended the Fourth Annual Conference of Mental Health Representatives of the State Medical Associations. This conference was sponsored by the American Medical Association Council on Mental Health and held in Chicago, Illinois. The chairman feels that the conference was most worth while and that The Medical Society of Virginia should be represented at these conferences each year.

There were four group discussion meetings during the conference, the following topics being discussed:

The Role of the General Practitioner in Relation to the Specific Psychiatric Case
Blue Cross-Blue Shield and Other Voluntary Health Insurance Plans for the Psychiatric Patient
Relationship of the Psychiatrist in Private Practice to the General Hospital in His Community
Psychiatric and Related Mental Health Problems in Industry

The committee's attention was called to a letter from the American Medical Association recommending (1) that the chairman of state committees on mental health be appointed for a minimum of three years and (2) that mental health chairmen of state auxiliaries be invited to attend all meetings of mental hygiene committees.

It was moved and passed that the suggestion of the A.M.A. with reference to a three year appointment for mental health committee chairmen be brought to the attention of the President-Elect of The Medical Society of Virginia.

The chairman informed the committee that he had already taken steps to make sure that the auxiliary be represented at meetings of the committee.

An item of major interest to the committee remains, adequate Blue Cross and Blue Shield coverage in mental hospitals for psychiatric conditions. In view of this, the Executive Director of the Virginia Hospital Service Association was invited to meet with our committee during its first meeting. He reported that beginning in June, 1958, the Richmond Blue Cross plan would cover mental illness, alcoholism and drug addiction for a period of sixty days. A discussion then ensued as to why the diversity of Blue Cross plans in various localities or areas. The executive director pointed out that this was undoubtedly necessary from an economic point of view. There was strong feeling by the committee that other Blue Cross plans in Virginia should follow Richmond's lead, and the question was raised as to how this might best be accomplished. It was thought that some type of communication with the various boards of directors might help and a merger of the various plans might well be the ultimate answer. It was the opinion of the Executive Director that any move in this direction should originate within The Medical Society of Virginia.

A motion was introduced, seconded and adopted recommending to the Council of The Medical Society of Virginia that all Blue Cross plans in Virginia he urged to adopt some equality of coverage in so far as psychiatric and emotional disorders are concerned.

The committee wishes to commend the Executive Director of the Virginia Hospital Service Association for the

manner in which he and the Richmond Blue Cross plan have cooperated with the committee in securing more adequate coverage for mental illness.

Appearing before the committee at its first meeting was a representative from the office of the Commissioner of Mental Hygiene and Hospitals. He expressed concern for the mentally defective children currently being cared for in nursing homes. He stated that many such homes are poorly equipped and that the children receive little, if any, medical care. It was the consensus that something should be done concerning this situation. It was decided to bring this to the attention of the Woman's Auxiliary and invite their assistance in promoting an educational campaign through P. T. A. and other organizations, hoping thereby that public attention could be aroused and that in some way an effectual means could be found to remedy this situation.

The committee was pleased to learn that one of last year's recommendations, namely, "That the question of restoration of driver's license without penalty for patients who have been treated for mental or emotional illness be given favorable consideration" had been received favorably by the Division of Motor Vehicles and that its questionnaire will be revised in such a way that a person discharged from a mental hospital as recovered will not be penalized.

The committee voted at its first meeting to make an attempt to secure space for a speaker, who would be representative of this committee, on the program of the annual meeting of The Medical Society of Virginia to be held in October, 1958. At the second meeting the chairman advised the committee that the Chairman of the Program Committee of The Medical Society of Virginia had kindly allotted us 30 minutes on Tuesday, October 14. Dr. Ewald W. Busse, Professor of Psychiatry at Duke University School of Medicine, has been secured to speak at this time. The subject will deal with problems of the aged.

During the first meeting of the committee there was discussion concerning permissive legislation which was passed by the 1958 General Assembly in order that a study could be made of the need for a mental hospital in northern Virginia. The committee agreed to consider a suggestion that The Medical Society of Virginia be requested to approve the proposed hospital in the northern area of Virginia.

At the second meeting of the committee, Senator Edward E. Willey, Chairman of the State Hospital Board, appeared by invitation and discussed the State Hospital System in general and the possibility of building a State mental hospital in northern Virginia. There was considerable discussion by the committee with Senator Willey concerning the establishment of such a hospital. However, no further action was taken by the committee.

The prohlem of therapeutic abortion continues difficult, and here the issue of emotional health is frequently raised.

We suggest that the society set up an appropriate committee including obstetricians to study the present trend of therapeutic abortion in Virginia.

The committee should attempt to learn if there is variation in the different localities in hospitals in the State concerning the incidence of therapeutic abortions and the reasons for any variations if they do exist.

The possible existence of committees in hospitals to recommend therapeutic abortions should be studied and the experience of these committees or any other machinery for handling this problem should be presented to the society for the benefit of all the members.

The committee wishes to go on record as opposing the current law making it mandatory for every patient being considered for commitment to a mental hospital to he represented by an attorney.

It was suggested that perhaps the name of this committee should be changed from Mental Hygiene to Mental Health Committee. (The president-elect will be contacted in this regard.)

The chairman wishes to express to the remainder of this committee and to Mr. Rohert I. Howard, Executive Secretary, his appreciation for their cooperation and assistance in the formation of this report.

J. Rudolph Saunders, M.D., *Chairman*
Joseph R. Blalock, M.D.
Thomas S. Edwards, M.D.
Joseph D. Lea, M.D.
R. Coleman Longan, Jr., M.D.
Theodore B. McCord, M.D.
G. Edmund Stone, M.D.

Federal Medical Services

The 1958 Committee on Federal Medical Services was chiefly concerned with the Medicare program.

Your Committee Chairman attended several meetings on Medicare during the year and communicated with a number of State Societies regarding Medicare.

The principal meeting was held in Richmond on April 13, 1958. The House of Delegates of The Medical Society of Virginia authorized further contract negotiations with the Department of the Army. In a Resolution adopted by a 52-33 vote, the Society's negotiators were instructed to attempt to secure a contract based on insurance or indemnity principles.

The contract with the Veterans Administration was reviewed and the fee schedule of 1957 was retained.

John T. Hazel, M.D., *Chairman*

Headquarters Building

The Headquarters Building Committee is pleased to report that the new Headquarters Building is in its final stages of completion and will be open to the membership during the Annual Meeting.

It will be recalled that, in October, 1956, the House of Delegates authorized the construction of a new headquarters at a cost not to exceed $120,000. Your Committee has carried out the directive of the House and has made every effort to remain within the limits stipulated. The Society has, at this writing, paid out a total of $75,600, which includes the cost of the land. As nearly as can be determined, an additional $35,000 will be more than sufficient to cover the remaining costs.

Although $8,000 of the above was allocated specifically for furnishings, your Committee has used the existing furniture and equipment whenever possihle. For example, a number of the present desks are being refinished at a cost of $50 rather than purchase new ones costing several hundred dollars. All of the furniture used in the reception room on Franklin Street is heing utilized to good advantage.

The first meeting to be held in the new headquarters, and properly so, will be that of Council on October 12. Immediately following the session at 4:00 P.M., the membership is invited to an open house. Directions for reaching the building can be found elsewhere in these pages.

The Committee wishes to express its appreciation to the architect, Mr. Marcellus Wright, Jr., and the contractor, Mr. Russell Blank, for their personal interest and cooperation in making this long time dream a reality.

The new building has been designed to serve the medical profession in Virginia, both collectively and individually, for many years. The Committee sincerely urges that you make full use of its facilities.

James P. King, M.D., *Chairman*
W. Linwood Ball, M.D.
Guy W. Horsley, M.D.
Fletcher J. Wright, Jr., M.D.
Louis P. Bailey, M.D.

Child Health

A meeting of the Committee on Child Health was held at Society Headquarters on August 7, 1958. Attending were Dr. Harry Cox, Chairman, Dr. Thomas S. Chalkley, Dr. Boyd Payne, Dr. Morris A. Lambdin, Dr. William E. Harman, Dr. W. N. Thompson, and Dr. William Fink.

There was a brief discussion concerning previously proposed research programs on the use of antibiotics in the eyes of the newborn. It was reported that no such programs were under way and that the use of prophylactic silver nitrate solution was generally approved by the profession. It was the consensus that no further recommendations on the matter should be made at present.

A question was raised concerning whether or not the word "mask" still remained in the Maternal Hospital Law. Mr. Duval, Attorney for the Society, was called and stated that apparently the word is not a part of the State Code itself, but rather is contained in the interpretation of the law by the State Department of Health. Dr. Cox stated that he would contact Dr. Shanholtz in this regard.

There followed a discussion concerning the problem of immunizations. Brought out was the fact that it is especially difficult to secure the cooperation of the indigent population. The Committee agreed that a very real doubt exists concerning the advisability of adopting laws to force compliance.

Considered next was the matter of working with hospitals in an effort to see that qualified physicians are placed in charge of nurseries. Dr. Lambdin reported on the work being done by Dr. Hogg and the Newborn Committee of the Virginia Chapter of the American Academy of Pediatrics. The Virginia Chapter has already set up a number of local committees to work closely with hospitals in this long term project. It was emphasized that the Committees are not necessarily attempting to place pediatricians in charge of nurseries, and that their primary interest is improving the care of the newborn.

Dr. William Fink, representing the Accident Prevention Committee of the Virginia Chapter of the American Academy of Pediatrics, reported on accidents of children. He reported that 15,000 children die each year because of accidents. Of particular interest was Dr. Fink's report on poison information centers which have already been established by the State Department of Health. The main centers exist in Richmond, Roanoke, Norfolk and Charlottesville and sub-centers have been set up in various hospitals over the state. Although many civic organizations are helping publicize the centers, there exists a definite need for an effective continuing campaign.

Dr. Fink recommended that the Committee on Child Health should (1) show practicing physicians how they can educate patients in accident prevention; (2) coordinate the activities of medical, nursing, and lay groups in accident prevention, and (3) assist in the forming of committees at the local level to publicize the importance of accident prevention.

Dr. Fink mentioned the possibility of arranging for a survey on child accidents. Suggested forms for such a survey were shown.

The Committee believed that definite steps should be taken with reference to minimizing the danger of poisons. It was mentioned that pharmacists should be urged to refer parents calling in to physicians or emergency rooms. It was also believed that every emergency room should contain a book such as "Clinical Toxicology of Commercial Products", published by Williams and Wilkins at $22.00. The Committee then recommended that the Bulletin of the State Health Department be employed to carry the message on poisons and that pamphlets be devised for distribution in physicians' offices.

Next on the agenda was a discussion of pre-school examinations. It was the consensus that The Medical Society of Virginia should recommend to the State Board of Education that schools be furnished the most up-to-date equipment for screening defects of vision and hearing.

There was some thought that the Committee should give some attention to making the public aware of the danger to children posed by rotary lawn mowers.

Also discussed was the current misconception of the value milk plays in the modern diet. It was mentioned that, although milk is a fine food, it should not be allowed to take the place of a balanced diet, since iron deficiency anemia will usually occur in children who depend on milk for their caloric requirements.

A question was raised concerning the stand of The Medical Society of Virginia with reference to fluoridation. It was explained that the Society had, several years ago, approved fluoridation based on recommendations and requirements as set forth by the State Department of Health.

Harry Cox, M.D., *Chairman*

To Study Future Vaccine Programs

In compliance with a resolution submitted by the Fairfax Medical Society and passed by the House of Delegates of The Medical Society of Virginia October 29, 1957, Dr. Harry C. Bates, President, appointed a special committee to study future vaccine programs in Virginia. The findings and recommendations of this Committee are respectfully submitted.

The Committee communicated with every component society of The Medical Society of Virginia. The problem was discussed with a representative of the Virginia Pharmaceutical Society. The State Department of Health, through the Commissioner, gave the Committee an outline of the methods of immunization used in the Department.

The Virginia Academy of General Practice has been most cooperative in offering suggestions and is willing to cooperate in correcting problems existing in this area of public health work. In some localities there appears to be no dissatisfaction with, or criticism of, existing programs. In other areas there is general dissatisfaction with present practices.

The areas of greatest concern are:

1. Clinics for mass immunization have been set up by organizations and groups not suitably trained for such activities. Many of these so-called clinics have been conducted with inadequate medical supervision.

2. In all of the mass inoculation clinics, records of some sort are kept, but these records are sometimes incomplete and inadequate and in some instances are unavailable to the patient, or can be obtained only by contacting the local Health Department or, in some instances, the files of some private group or foundation.

3. Many of the component societies are disturbed by the sometimes unfair distribution of vaccine. Available immunizing agents have frequently, in the past, been stock piled by the Federal Government or the State Department of Health, and distribution has been inequitable.

4. The Committee became aware early in its work that the whole field of preventive medicine and Public Health had been allowed to assume a secondary place in the thinking of medical men throughout the State. More emphasis needs to be given to the practice of preventive medicine by individual physicians in a continuing program of education and persuasion in order to protect the community from contagious and infectious diseases controllable by immunizations or sanitary practices which should be implemented by the family physician as a part of the patient's total care. The prevention of communicable diseases has been relegated to a secondary position in private practice. The Committee is of the opinion that private practitioners frequently develop methods for control of contagious disease that are more applicable to existing conditions than are the spasmodic or emergency type clinics, so popular at the present time, as the sole method used to combat epidemics or threatened epidemics.

The Committee respectfully submits the following suggestions for improvement of the personal practice of preventive medicine under the auspices of The Medical Society of Virginia:

1. That every effort possible be made to stimulate the interest of the doctors throughout the State in the importance of the practice of preventive medicine. Opportunities for preventive medicine and public health work should be handled as a routine part of the total care of the individual physician's patients. Physicians should be encouraged to take part in the civic life of their communities and the component societies should always be ready to offer planning and assistance at the local level.

2. Continuous and adequate publicity should be prepared by standing committees of the local county medical societies on all aspects of preventive medicine to regulate authoritative releases through various media of communication. The local societies should be encouraged to utilize the county and regional weekly newspapers and local radio and television stations.

3. The Committee recommends that a standing committee of The Medical Society of Virginia be established to review and evaluate future programs relating to immunizing agents and to work out details for the distribution and administration on a State and local level best adapted to the State of Virginia. Members of this committee should be representative of the specialty groups whose members deal with the general care of the citizens of the State. The State Department of Health and the Virginia Pharmaceutical Association should also be represented.

4. The Medical Society of Virginia, or the component societies at the local level, should be consulted and the society's approval obtained before any clinics for mass immunization are set up. In turn each society should develop the necessary board or committee enabling it to function in a speedy and intelligent manner.

5. The Committee recommends that clinics for mass immunization should be approved *only* under the following conditions:

a. For clearly defined research projects with definite time limitations.

b. When necessary to control an epidemic.

c. When necessary to provide protection to people unable to afford preventive health care.

d. The protection of employees or members of an organization when the physician giving the immunization is regularly employed by the organization.

6. That, ordinarily, the distribution of all sera and immunizing agents be made only through the regular wholesale or retail drug channels. That distribution not be made to individual groups or government organizations as such, but that distribution be made on an equitable basis throughout the State on the basis of population concentration only. In the event that local or regional epidemic conditions necessitate immunizations on a regional basis, the same conditions as to per capita distribution should obtain on the regional level.

The Committee has enjoyed the privilege of participating in this investigation. There is a large volume of data in its file that will be available to any other committee doing similar studies.

The members wish to thank the Society for this opportunity to serve and hope that its findings will be of value to the Society and its members.

C. C. Hatfield, M.D., *Chairman*
Robert C. Hood, M.D.
D. W. Scott, Jr., M.D.

Specific and Chronic Diseases

This Committee, as it was organized, was a new one this year, appointed by the President as a combination Committee replacing the committees formerly covering Tuberculosis, Heart, Cancer, Cerebral Palsy, Diabetes, Venereal Disease and Poliomyelitis. This change was made in an effort to streamline activities and reduce the total number of committees of The Medical Society of Virginia. Since this was the first year of operation in this manner there were a number of problems of organization, but it appeared that the large committee, operated under one chairman and with sub-committees in each of the above named fields was an advantage over the previous method of operation. It afforded a wider viewpoint and opportunity for extensive discussion on specific problems which

confronted the Committee and it is our opinion that this Committee should be continued.

One of the primary problems confronting the Committee this year was that handed it by the House of Delegates in a resolution passed October 29, 1957, concerning the problem of mounting vacancies in the State tuberculosis sanitariums. A meeting of the full Committee at Catawba Sanitarium, December 20, 1957, considered this problem and at that time it appeared that many beds in the tuberculosis sanitariums would be available for the treatment of other chronically ill patients. However, since that time the case finding program of the State Health Department has been intensified and the tuberculosis hospitals are again running at near capacity. It is the opinion of this Committee that the sanitarium beds should be used for tuberculosis exclusively in so long as they are needed and that should a large number of vacancies exist in the future the problem should be reconsidered. In any event there can be no change in the policy of admission until the next meeting of the state legislature and since there will be another meeting of the Society prior to this legislative session, we believe that this problem should be kept open and restudied, for future recommendations at the meeting of The Medical Society of Virginia in 1959.

In connection with the problem of tuberculosis sanitarium beds the State Health Department estimated that there are ten thousand undiscovered cases of tuberculosis in Virginia. The Committee believes that the Case-Finding Program of the State Health Department should be further intensified and urges the cooperation of all component societies of The Medical Society of Virginia. A resolution will be introduced into the House of Delegates urging such cooperation.

The Chairman of the Committee on Specific and Chronic Diseases has served this year as a member of the State Health Department Advisory Committee on Tuberculosis and can report that the State Health Department is organizing itself for an all-out effort to locate unknown cases of tuberculosis.

The Sub-Committee on Cancer has continued to function as the representative of The Medical Society of Virginia in surveying and passing on applications for tumor clinics throughout the state.

The Sub-Committee on Poliomyelitis has been concerned with a public apathy toward the Salk vaccine program and will introduce a resolution urging a more intensive campaign to immunize all susceptible individuals.

The Chairman wishes to thank the members of the Committee for their time and cooperation and the staff of The Medical Society of Virginia executive office for their help throughout the year.

William H. Barney, M.D., *Chairman*

To Confer with the State Board of Nurse Examiners

The Committee to Confer with the State Board of Nurse Examiners had a very pleasant and instructive meeting with the Nurse Examiners on June 19, 1958, in Richmond. Their Board consists of five professional nurses and one practical nurse with Miss Roy Beazley, R.N., as Chairman, and Miss Mabel Montgomery, R.N., as Secretary-Treasurer. We learned that there are seventy-five hundred R.N.'s in active practice in Virginia as of 1957, eight hundred more than in 1956. We learned that there is one more training program in progress and that there has been an increase in the number of nursing students, also since 1956.

There are thirty-five training programs for professional nursing in Virginia and twelve for practical nurse training. Each of these are visited annually by members of the Board whose intention is to promote these programs and maintain high standards for the public good. The professional nurse program breaks down into twenty-nine hospital diploma schools, three collegiate training program schools and three two-year certificate schools. All of these are ultimately examined as R.N.'s. We learned that the Alexandria Hospital training program has produced candidates who have scored high on testing, and we studied their methods briefly, as well as their situation, to learn how other schools might profit.

The group discussed nurse recruiting and learned that this was most successful by having nurse groups, including students, visit high school girls on career days. It was felt that these students will respond to an appeal on the basis of what contribution they may be able to make to society. We learned that the Board is presently devising a brochure for recruitment called "Doorway to Nursing". This gives all the pertinent facts that an interested high school student might need to know about the various nursing programs in schools and should prove a great help in recruiting. It will cost about seven hundred dollars to publish this, and the Board is in need of money for this purpose. Your Committee recommends that The Medical Society of Virginia make a gift of three hundred dollars to assist the Nursing Board in this manner. Other funds are being given by the Virginia League of Nursing, and your Committee feels that this would be money well spent to bring about a better alliance of doctors and nurses in the interest of better medical care for the patient.

Your Committee also felt that Virginia physicians could be encouraged to help in the recruiting and in the training of nurses wherever the opportunity presented itself in their daily work and that this might be promoted by the giving of a one-page ad or picture appeal in the Virginia Medical Monthly, which with a proper approach, would briefly solicit such cooperation.

Our third recommendation is that we join with the Board of Nurse Examiners in requesting that such a conference as this be held at least once a year, preferably in the month of June.

John R. Mapp, M.D., *Chairman*

Liaison to the State Bar Association

Your committee recommends that the following "Standards of Principles Governing Lawyers and Physicians" be adopted by the House of Delegates of The Medical Society of Virginia. The membership will be interested to learn that these "Standards" were unanimously adopted by the Virginia State Bar during its recent annual meeting.

STANDARDS OF PRINCIPLES GOVERNING LAWYERS AND PHYSICIANS

Preamble

Acknowledging that a substantial part of the practice of law and medicine is concerned with the problems of persons who are in need of the combined services of a

lawyer and a physician; and that the public interest and individual problems in these circumstances are best served only as a result of cooperative efforts of all concerned; we, the Virginia State Bar and The Medical Society of Virginia do adopt and recommend the following declaration of principles of proper conduct for lawyers and physicians, subject always to principles of medical and legal ethics and rules of law prescribed for their individual professional conduct.

A. Medical Reports.

1. Where a report is requested by the patient's attorney, supported by proper written authorization, and where the report is to be based on information which the physician can obtain from available records, he should furnish a report as promptly as possible.

2. Where the report is requested by someone other than the patient, or the patient's attorney, the physician should insist upon proper written authorization from the patient before giving the information or the report and his charge for such report should be in an amount to be agreed upon between him and the person seeking that report.

3. When a report is requested, the lawyer should make clear in his written request for a report the specific condition about which he seeks information, and should likewise indicate whether or not he is asking for a prognosis, diagnosis or extent of disability. The physician, upon receipt of such request, should answer such request and furnish such report promptly.

B. Physicians As Witnesses.

1. The relation between a lawyer and a physician should be based upon mutual courtesy and understanding. A physician should understand that medical testimony is frequently indispensable to prove or disprove the nature and extent of injuries. Therefore, when he undertakes to treat a person who has been injured, he has an incidental responsibility with respect to any legal proceedings which may ensue as a result of the patient's injury.

2. It is understood that the fee charged by the physician for his medical services does not take into account any further time or effort on his part in the event of such litigation, and therefore these principles recognize that it is right and proper that the physician should be further compensated for any additional time or effort expended by him in such litigation.

3. It is recognized that in most instances it is proper that a conference should be held between the physician and lawyer proposing to call him as a witness, at some mutually convenient time before he is to testify.

No physician should be subpoenaed as a witness to testify in any case without prior conference with the lawyer calling him, concerning the matters as to which he is to be interrogated, unless both the physician and the lawyer agree that such conference is unnecessary, or unless the lawyer is unable, after a bona fide effort, to obtain such a conference.

4. When requesting or summoning a physician to attend court, the lawyer should appreciate that a physician has continuing and often unpredictable responsibilities to his patients. Insofar as he is able, the lawyer should make arrangements to permit the physician to testify with a minimum of inconvenience and delay.

5. Insofar as it is in their power to do so, however, lawyers should make such advance arrangements for the attendance of physicians as witnesses, as will have due regard for the professional demands upon the physician's time, including preparation of medical evidence. Such advance arrangements contemplate some reasonable notice to the physician of the intention to call him as a witness, prior to the issuance of the subpoena, and calling him by phone after the trial has commenced and advising him of the approximate time when he will be called to testify.

6. It is recognized that, although every reasonable effort should be made to minimize the inconvenience to the physician witness, the dispatch of the duties of the courts cannot be governed by the convenience of litigants, lawyers or witnesses, whoever they may be.

7. When a physician, who has not treated the injured party, is called to testify as an expert witness, he shall be paid such fee as is agreed upon prior to the trial with the lawyer representing the party calling him.

8. The physician, while testifying should:

(a) At all times maintain the dignity of his profession;

(b) Answer questions as concisely and objectively as possible, using terminology which is understandable to a jury of laymen.

(c) If he does not know the answer to any question, so state and make no attempt to conjecture or theorize, or give answers not responsive to questions propounded or volunteer testimony;

(d) Under no circumstances permit any bias, prejudice, favoritism or personal interest to influence his testimony.

9. The attorney, in examining or cross-examining a physician, should, as in the case of all other witnesses, avoid questions which are intemperate or unfair. Questions of this type are no doubt designed to discredit a witness' testimony by inciting emotional demonstration and are beneath the dignity of the ethical attorney and equally in violation of the dignity of the physician. If they do arise and are not acted on promptly, the witness may address the court and inquire if he is required to answer such questions.

10. All additional medical consultations considered necessary to the proper preparation for a legal presentation should be accomplished only after consultation with the patient-litigant's legal representative and the patient-litigant's physician.

11. Nothing herein is intended to alter the rules of law with reference to attendance of witnesses and fees for their attendance nor the law with reference to privileged communications.

C. Physician's Fee and Services.

1. It is fully understood that under no circumstances should the physician's charges, or his fees as a witness, be contingent upon the success of the patient's litigation.

Edward E. Haddock, M.D., *Chairman*
William Dolan, M.D.
G. T. Mann, M.D.

American Medical Education Foundation

The problem before your American Medical Education

Foundation Committee is an obvious one; the AMEF is attempting to help meet an urgent and legitimate need. All funds donated go to the schools, all administrative costs are met by the AMA and do not come from the donated funds. In addition, funds to the AMA from industry are supplied through this agency. In other words, the schools collect more than the physicians of the state donate. The AMEF seems to me a cause considerably more worthwhile than many in which we are involved.

One hundred and eighty-four Virginia physicians gave $7,209 to the American Medical Education Foundation during 1957. Six hundred and thirty-six contributed another $30,000 through their alumni associations. There are 2,800 active physicians in The Medical Society of Virginia. Thus, a small number donated surprisingly large amounts. It seems obvious to this committee that the physicians of the State are not being reached. It seems also apparent that a small committee of the Society cannot reach them.

It is interesting that other states have felt strongly enough to incorporate an assessment in the state dues. There are many obvious objectives to this approach.

The only other possible approach is that of setting up a statewide organization, the key of which will be the chairmen of county and city societies. The role of the county chairman, we believe, should be that of one who bears information, rather than one who brings pressure on his fellows.

The State committee has no immediate plans for a specific drive. Throughout the year donations have trickled in at about the same rate as last year. If we can form an organization this year, something in the nature of a drive during Medical Education Week might be possible in ensuing years. As yet all societies have not been heard from and organization is incomplete.

Further communication will come from this committee as progress is made. The committee welcomes any specific questions or comments from you.

JOHN C. WATSON, M.D., *Chairman*
REVERDY H. JONES, JR., M.D.
JAMES B. ADAMS, M.D.

Radiation Hazards

The Committee on Radiation Hazards has met on two occasions. It will be recalled that the Committee was appointed at the direction of the House of Delegates and was requested "to study and advise concerning the hazards of radiation exposure".

The Committee gave careful consideration to a proposed bill which has the endorsement of the State Department of Health. This bill, which the Committee hopes will be introduced during the next session of the General Assembly, would accomplish four basic objectives. It would (1) encourage constructive uses of radiation and control associated potentially harmful effects, (2) establish an official agency to deal with radiation hazards in Virginia, (3) require registration of all radiation equipment, and (4) set up an advisory committee to the State Health Department or such other agency as might be established.

The Committee also cooperated with the sub-committee on tuberculosis of the Committee on Specific and Chronic Diseases. The advice of the Committee was sought with reference to the use of mass x-ray surveys. This matter is covered in the report of the Committee on Specific and Chronic Diseases.

It is the intention of this Committee to cooperate closely with a similar committee of the American Medical Association and to do everything possible to insure that Virginia's radiation program is maintained on a sane and sound basis.

P. B. PARSONS, M.D., *Chairman*
FRANK R. KELLY, JR., M.D.
GEORGE COOPER, JR., M.D.
MACK I. SHANHOLTZ, M.D.

DELEGATES TO THE 1958 MEETING THE MEDICAL SOCIETY OF VIRGINIA

Where no name is listed it is indicative that no delegate or alternate was reported in time for publication.

Delegates	*Alternates*
Accomack	
Dr. Walter A. Eskridge	Dr. E. G. White
Albemarle	
Dr. Malcolm D. Foster	Dr. Byrd S. Leavell
Dr. McLemore Birdsong	Dr. Guy Hollifield
Dr. Thomas S. Edwards	Dr. G. S. Fitz-Hugh
	Dr. Charles P. Pearson
Alexandria	
Dr. John C. Watson	Dr. John A. Sims
Dr. Richard E. Palmer	Dr. Ben C. Jones
Alleghany-Bath	
Amherst-Nelson	
Arlington	
Augusta	
Dr. W. G. Painter	Dr. J. H. Thomas
Dr. Boyd H. Payne	Dr. McKeldon Smith
Dr. Charles L. Savage	Dr. Treacy O'Hanlan
Bedford	
Dr. W. V. Rucker	Dr. O. B. Darden
Botetourt	
Buchanan-Dickenson	
Dr. J. C. Moore	Dr. J. S. Richardson
Dr. T. C. Sutherland	Dr. J. P. Sutherland
Charlotte	
Dr. Thomas Watkins	
Culpeper	
Danville-Pittsylvania	
Dr. J. J. Neal	Dr. J. J. Marsella
Dr. Snowden C. Hall, Jr.	Dr. J. D. Beale

Delegates	*Alternates*
Fairfax	
Fauquier	
Dr. James L. Dellinger	Dr. Walter S. Nicklin
Floyd	
Fourth District	
Fredericksburg	
Dr. Thomas B. Payne	Dr. Lloyd L. Moss
Dr. John L. Smoot	Dr. W. D. Liddle, Jr.
Halifax	
Hampton	
Dr. Frank A. Kearney, III	Dr. O. W. Ward, Jr.
Hanover	
Dr. John D. Hamner	Dr. Edwin S. Wysor
James River	
Dr. Russell Snead	
Dr. W. A. Pennington	Dr. Garland Dyches
Dr. J. H. Yeatman	Dr. A. C. Whitley
Lee	
Dr. G. B. Setzler	Dr. T. S. Ely
Loudoun	
Louisa	
Lynchburg Academy	
Dr. Ernest G. Scott	Dr. B. K. Mundy
Dr. Charles W. Whitmore	Dr. W. H. Barney
Dr. G. Edward Calvert	Dr. R. F. Hawkins
Mid-Tidewater	
Dr. Joseph W. Chinn	
Dr. A. L. Van Name, Jr.	
Dr. Richard B. Bowles	
Dr. William H. Hosfield	
Dr. Joseph R. Parker	
Dr. Carl Broaddus	
Dr. Arthur J. Martin	
Newport News	
Dr. Russell Buxton	Dr. Frank S. Beazlie, Jr.
Dr. J. W. Carney	Dr. F. N. Thompson
Dr. E. V. Siegel	Dr. J. W. Tankard
Dr. Paul Hogg	Dr. E. B. Mewborne
Norfolk	
Dr. W. Callier Salley	Dr. Bernard L. Parrish
Dr. Claiborne W. Fitchett	Dr. Marvin S. Herrington
Dr. Mason C. Andrews	Dr. John A. Cocke
Dr. Samuel M. McDaniel	Dr. Cullen M. McCoy
Dr. William L. Taliaferro	Dr. H. C. Meredith, Jr.
Dr. Harry Frieden	Dr. Donald T. Faulkner
Dr. Mallory S. Andrews	Dr. Aubrey L. Shelton
Northampton	
Dr. John R. Mapp	Dr. H. L. Denoon, Jr.
Northern Neck	
Dr. Horace E. Kerr	Dr. Harper Ward
Dr. Norman R. Tingle	Dr. A. B. Gravatt
Dr. Harold E. Sisson	Dr. Paul Pearson
Dr. C. L. Booker	Dr. M. B. Lamberth, Jr.
Northern Virginia	
Orange	

Delegates	*Alternates*
Patrick-Henry	
Dr. Harry C. Foster, Jr.	Dr. L. A. Faudree
Dr. S. W. Adams, Jr.	Dr. H. H. Price
Dr. W. N. Thompson	Dr. E. T. McNamee
Portsmouth	
Dr. Paul Robinett	
Dr. Russell M. Cox	
Princess Anne	
Dr. Ira L. Hancock	
Richmond Academy	
Dr. Webster P. Barnes	Dr. D. D. Talley, III
Dr. Elam C. Toone, Jr.	Dr. Frederick P. Moore, II
Dr. Carl Meador	Dr. William R. Hill
Dr. Thomas W. Murrell, Jr.	Dr. Thomas F. Coates, Jr.
Dr. J. B. Stone	Dr. John D. Call
Dr. E. B. Carpenter	Dr. A. I. Dodson, Jr.
Dr. Stuart Ragland, Jr.	Dr. Leslie Rose
Dr. Robley D. Bates, Jr.	Dr. Willard Fitch
Dr. W. Linwood Ball	Dr. H. St. Geo. Tucker, Jr.
Dr. John W. Powell	Dr. Kinloch Nelson
Dr. J. R. Massie, Jr.	Dr. Custis Coleman
Dr. W. B. Blanton, Jr.	Dr. M. M. Pinckney
Dr. William H. Higgins, Jr.	Dr. Emmett Mathew
Roanoke Academy	
Dr. Allen Barker	Dr. Robert L. A. Keeley
Dr. David S. Garner	Dr. T. J. Humphries
Dr. Reverdy H. Jones, Jr.	Dr. Robert S. Hutcheson, Jr.
Dr. William H. Kaufman	Dr. M. A. Johnson, III
Dr. Harry B. Stone, Jr.	Dr. Charles H. Peterson
Dr. P. A. Wallenborn, Jr.	Dr. Louis P. Ripley
Rockbridge	
Rockingham	
Dr. G. M. Nipe	Dr. C. C. Powel
Dr. J. T. Glick	Dr. J. C. Harshbarger
Russell	
Scott	
Southwestern Virginia	
Dr. J. Scott Shaffer	Dr. James Suter
Dr. O. O. Smith	Dr. J. J. Eller
Dr. Carl E. Stark	Dr. W. R. Chitwood
Dr. George B. Kegley	
Dr. W. Fred Delp	Dr. Hugh H. Brown, Jr.
Dr. Charles R. Duncan	Dr. Ray Grubbs
Dr. J. G. Cox	Dr. M. G. Martin
Dr. S. A. Tuck	Dr. E. L. Bagby
Dr. Scott Elliott	
Tazewell	
Dr. Rufus Brittain	Dr. James Peery
Tri-County	
Dr. William N. Eddy	Dr. M. A. Michael
Dr. George Carroll	Dr. Philip R. Thomas
Dr. T. A. Morgan	Dr. J. W. Lambdin
Dr. Ivan Steele	Dr. Rea Parker
Williamsburg-James City	
Dr. Ben T. Painter	Dr. Linwood Farley
Dr. Hugh G. Stokes	Dr. R. E. DeBord
Wise	
Dr. W. B. Barton	Dr. W. F. Schmidt

Presidents of The Medical Society of Virginia

President	Year of Meeting
*Dr. James McClurg, Richmond	1821
*Dr. William Foushee, Richmond	1822
*Dr. William Foushee, Richmond	1823
*Dr. James Henderson, Richmond	1824
Meetings Discontinued	
*Dr. Robert William Haxall, Richmond	1841
*Dr. Robert William Haxall, Richmond	1842
*Dr. Frederick Marx, Richmond	1843
*Dr. Thomas Nelson, Richmond	1844
*Dr. William A. Patteson, Richmond	1845
*Dr. William A. Patteson, Richmond	1846
*Dr. John A. Cunningham, Richmond	1847
*Dr. William A. Patteson, Richmond	1848
	1849
*Dr. Robert William Haxall, Richmond	1850
*Dr. Beverley R. Wellford, Fredericksburg	1851
*Dr. James Beale, Richmond	1852
*Dr. Thomas P. Atkinson, Danville	1853
*Dr. Carter P. Johnson, Richmond	1854
*Dr. H. C. Worsham, Dinwiddie	1855
*Dr. H. C. Worsham, Dinwiddie	1856
*Dr. James Bolton, Richmond	1857
*Dr. Levin S. Joynes, Richmond	1858
Meetings Discontinued	
*Dr. R. S. Payne, Lynchburg	1870
*Dr. R. S. Payne, Lynchburg	1871
*Dr. A. M. Fauntleroy, Staunton	1872
*Dr. Harvey Black, Blacksburg	1873
*Dr. A. G. Tebault, London Bridge	1874
*Dr. S. C. Gleaves, Wytheville	1875
*Dr. F. D. Cunningham, Richmond	1876
*Dr. J. L. Cabell, University	1877
*Dr. J. H. Claiborne, Petersburg	1878
*Dr. L. S. Joynes, Richmond	1879
*Dr. Henry Latham, Lynchburg	1880
*Dr. Hunter McGuire, Richmond	1881
*Dr. G. W. Semple, Hampton	1882
*Dr. W. D. Cooper, Morrisville	1883
*Dr. J. E. Chancellor, Charlottesville	1884
*Dr. S. K. Jackson, Norfolk	1885
*Dr. Rawley W. Martin, Chatham	1886
*Dr. Bedford Brown, Alexandria	1887
*Dr. Benjamin Blackford, Lynchburg	1888
*Dr. E. W. Row, Orange C. H.	1889
*Dr. Oscar Wiley, Salem	1890
*Dr. W. W. Parker, Richmond	1891
*Dr. H. Grey Latham, Lynchburg	1892
*Dr. Herbert M. Nash, Norfolk	1893
*Dr. Wm. P. McGuire, Winchester	1894
*Dr. Robt. J. Preston, Abingdon	1895
*Dr. Wm. L. Robinson, Danville	1896
*Dr. Geo. Ben Johnston, Richmond	1897
*Dr. Lewis E. Harvie, Danville	1898
*Dr. Jacob Michaux, Richmond	1899
*Dr. Hugh T. Nelson, Charlottesville	1900
*Dr. J. R. Gildersleeve, Tazewell	1901
*Dr. R. S. Martin, Stuart	1902
*Dr. J. N. Upshur, Richmond	1903

President	Year of Meeting
*Dr. Joseph A. Gale, Roanoke	1904
*Dr. Wm. S. Christian, Urbanna	1905
*Dr. Lomax Gwathmey, Norfolk	1906
*Dr. Paul B. Barringer, Charlottesville	1907
*Dr. Wm. F. Drewry, Petersburg	1908
*Dr. Stuart McGuire, Richmond	1909
*Dr. E. T. Brady, Abingdon	1910
*Dr. O. C. Wright, Jarratt	1911
*Dr. Hugh M. Taylor, Richmond	1912
*Dr. Southgate Leigh, Norfolk	1913
*Dr. Stephen Harnsberger, Catlett	1914
*Dr. Samuel Lile, Lynchburg	1915
*Dr. Joseph A. White, Richmond	1916
*Dr. Geo. A. Stover, South Boston	1917
*Dr. Ennion G. Williams, Richmond	1918†
*Dr. Ennion G. Williams, Richmond	1919
*Dr. Paulus A. Irving, Farmville	1920
*Dr. Alfred L. Gray, Richmond	1921
*Dr. E. C. S. Taliaferro, Norfolk	1922
*Dr. John Staige Davis, University	1923
*Dr. W. W. Chaffin, Pulaski	1924
*Dr. Hunter H. McGuire, Winchester	1925
Dr. W. L. Harris, Norfolk	1926
*Dr. J. Shelton Horsley, Richmond	1927
*Dr. J. W. Preston, Roanoke	1928
*Dr. J. Bolling Jones, Petersburg	1929
*Dr. Charles R. Grandy, Norfolk	1930
*Dr. J. Allison Hodges, Richmond	1931
*Dr. I. C. Harrison, Danville	1932
*Dr. J. C. Flippin, University	1933
*Dr. R. D. Bates, Newtown	1934
*Dr. F. H. Smith, Abingdon	1935
*Dr. P. St. L. Moncure, Norfolk	1936
Dr. J. M. Hutcheson, Richmond	1937
*Dr. G. F. Simpson, Purcellville	1938
Dr. A. F. Robertson, Jr., Staunton	1939
*Dr. H. H. Trout, Roanoke	1940
Dr. W. B. Martin, Norfolk	1941
*Dr. Roshier W. Miller, Richmond	1942
Dr. J. M. Emmett, Clifton Forge	1943
*Dr. C. B. Bowyer, Stonega	1944
Dr. H. B. Mulholland, Charlottesville	1945
*Dr. Julian L. Rawls, Norfolk	1946
*Dr. W. L. Powell, Roanoke	1947
*Dr. Guy R. Fisher, Staunton	1948
*Dr. M. Pierce Rucker, Richmond	1949
Dr. W. C. Caudill, Pearisburg	1950
Dr. C. Lydon Harrell, Norfolk	1951
Dr. John T. T. Hundley, Lynchburg	1952
Dr. James L. Hamner, Mannboro	1953
Dr. V. W. Archer, Charlottesville	1954
Dr. Carrington Williams, Richmond	1955
Dr. James P. King, Radford	1956
Dr. James D. Hagood, Clover	1957
Dr. H. C. Bates, Arlington	1958

*Deceased.

†Owing to influenza epidemic during World War I, the council met in 1918, and Dr. Williams was continued as President.

Miscellaneous . . . .

Principles of Medical Ethics

This is the seventh of the series of "Principles of Medical Ethics", the first appearing in the February issue. Each section will be reviewed, accompanied by a detailed explanation from the Judicial Council of the American Medical Association.

SECTION 9

A physician may not reveal the confidences entrusted to him in the course of medical attendance, or the deficiencies he may observe in the character of patients, unless he is required to do so by law or unless it becomes necessary in order to protect the welfare of the individual or of the community.

TRADITIONAL CONCEPTS INCLUDED WITHIN SECTION 9

The Judicial Council is of the opinion that Section 9 of the Principles of Medical Ethics, 1957, embraces the spirit and intent of several sections of the 1955 edition of the Principles, including Chapter II, Section 2 (Patience, Delicacy, and Secrecy) and Chapter II, Section 3 (Prognosis). These sections are reproduced below as guides in the interpretation of Section 9.

Chapter II, Section 2 (Patience, Delicacy, and Secrecy) 1955 edition of the Principles of Medical Ethics:

> Patience and delicacy should characterize the physician. Confidences concerning individual or domestic life entrusted by patients to a physician and defects in the disposition or character of patients observed during medical attendance should never be revealed unless their revelation is required by the laws of the state. Sometimes, however, a physician must determine whether his duty to society requires him to employ knowledge, obtained through confidences entrusted to him as a physician, to protect a healthy person against a communicable disease to which he is about to be exposed. In such instance, the physician should act as he would desire another to act toward one of his own family in like circumstances. Before he determines his course, the physician should know the civil law of his commonwealth concerning privileged communications.

Chapter II, Section 3 (Prognosis) 1955 edition of the Principles of Medical Ethics:

> The physician should neither exaggerate nor minimize the gravity of a patient's condition. He should assure himself that the patient, his relatives or his responsible friends have such knowledge of the patient's condition as will serve the best interests of the patient and the family.

ANNOTATIONS
to
SECTION 9
OPINION AND REPORTS OF THE JUDICIAL COUNCIL

The following are excerpts from Reports and Opinions of the Judicial Council which are applicable in interpreting Section 9.

Records of Patients and Succeeding Physicians

At the request of the patient, preferably in writing, reports should be immediately sent to the doctor then in charge of the patient. The diagnosis of the patient's ailment is paramount in arriving at the proper treatment to be rendered, and all information which aids the physician should be furnished so that proper treatment or advice can be given without delay. Whether the contents of the report are to be given to the patient rests with the decision of the doctor who knows all the circumstances involved in the situation. (*1946 Report*)

Copy of Physicians Record to Patient

The Judicial Council does not believe that Chapter II, Section 3 (1955 edition of the Principles) intends or requires that a physician give a copy of his records to his patient. These records are primarily the physician's own notes compiled during the course of diagnosis and treatment so that he may review and study the course of the illness and his treatment. The records are medical and technical, personal and often informal. Standing alone they are meaningless to the patient but of value to the physician and perhaps to a succeeding physician. The patient, however, or one responsible for him, is entitled to know the nature of the illness and the general course or regimen of therapy employed by his physician. The extent to which the physician must advise his patient may be limited by the nature of the illness and the character of the patient. The physician in advising his patient must always act as he would wish to be treated were he in a like situation. (*JAMA, June 9, 1956*).

Copy of Patient's Record to Another Physician

The interest of the patient is paramount in the practice of medicine, and everything that can reasonably and lawfully be done to serve that interest must be done by all physicians who have served or are serving the patient. When a colleague who is presently treating a patient requests records from another physician who has formerly treated the patient, that former physician should promptly make his records available to the attending physician.

No set rule can be laid down to cover the manner in which the records are to be transmitted to the attending physician. Under some conditions a personal inspection of the records might suffice; under others an oral report of what is contained in the records would be of help; or in other circumstances a summary of the records might be made. In extreme cases, a physician might lend his complete record to the attending physician. The manner of making the report—or the information contained therein—available to the succeeding physician is immaterial and will depend on the circumstances of each case. Certainly, however, the attending physician should not demand or expect more information from the former physician than is necessary to give the patient adequate care in the present illness.

The Judicial Council assumes, of course, that proper authorization for the use of these records has been granted by the patient. (*JAMA, June 9, 1956*).

Hospital Statistics

Hospitals in the continental United States cared for 22,993,000 patients in 1957, more than in any previous year and an increase of more than 900,000 from the 1956 total of 22,089,000, according to the American Hospital Association.

A total of 3,739,259 babies were born in United States hospitals last year, a rise of 248,118 over the 1956 total of 3,491,141 hospital births. On any given day in 1957, an average of 1,320,000 patients and 48,775 newborn infants were hospitalized.

Hospital admissions have risen steadily each year since 1946, when the American Hospital Association began its statistical series. The 1957 statistics were published in Part II of the annual Guide Issue of Hospitals, Journal of the American Hospital Association. The information was compiled from questionnaires sent to 6,818 hospitals in the continental United States.

The voluntary hospitals which care for the great majority of the acute short-term cases in the nation spent an average of $26.81 a day for the care of each patient, an increase of $1.82 over 1956. In these hospitals, the average expenditure on each patient in 1957 was $198.39 compared with $181.43 in 1956. The average patient stay in the voluntary hospitals was 7.4 days, a slight decrease from 7.5 days in 1956.

Patients in voluntary hospitals paid an average of $1.52 a day less in 1957 than it cost to care for them. Total income from patients in all voluntary hospitals in 1957 was $2,878,254,000, while expenses were $3,050,398,000. Patient income made up 94.3 per cent of the total income of all these hospitals in 1957, as compared with 96.1 per cent in 1956. The balance came from contributions, grants and income from such sources as endowments.

In 1957, an average of 107 personnel per 100 patients were employed in all hospitals, as compared with 101 in 1956. Within this average was a range from 218 personnel per 100 patients in voluntary short-term hospitals to 32 per 100 patients in non-federal psychiatric hospitals.

More than 260,000 professional nurses worked full-time in hospitals in 1957. This included nearly 230,000 nurses as hospital employees and more than 30,000 private duty nurses. In addition, almost 58,000 professional nurses served in hospitals on a part-time basis.

Book Announcements . . . .

Books received for review are promptly acknowledged in this column. In most cases, reviews will be published shortly after the acknowledgment of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

Fat Consumption and Coronary Disease. The Evolutionary Answer to This Problem. A Basic Approach to the Prevention and Arrest of Coronary Disease. By T. L. CLEAVE, M.R.C.P. (London), Surgeon Captain, Royal Navy. With A Foreword by Percy Stocks, C. M. G., M.A., M.D. (Camb.), F.R.C.P. (Lond.), F.S.S., Senior Research Fellow, British Empire Cancer Campaign; etc. Philosophical Library, New York. 1958. 40 pages. Price $2.50.

The Atomic Age and Our Biological Future. By H. V. BRONDSTED. Translated by E. M. Huggard. Philosophical Library, New York. 1958. xiv-80 pages. Price $2.75.

Our Nuclear Adventure. Its Possibilities and Perils. By D. G. ARNOTT. Philosophical Library, New York. 1958. xi-170 pages. Price $6.00.

Chemistry and Biology of Mucopolysaccharides. Ciba Foundation Symposium. Editors for the Ciba Foundation, G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Maeve O'Connor, B.A. Little, Brown and Company, Boston. 1958. xii-323 pages. With 48 illustrations. Price $8.50.

New and Nonofficial Drugs. Containing Descriptions of Therapeutic, Prophylactic and Diagnostic Agents Evaluated by the Council on Drugs (Formerly, Council on Pharmacy and Chemistry) of the American Medical Association. 1958. An Annual Publication Issued Under the Direction and Supervision of the Council. J. B. Lippincott Company, Philadelphia. 1958, xxx-645 pages. Price $3.35.

The Neuroses and Their Treatment. Edited by Edward Podolsky, M.D., F.A.P.A., F.A.P.M., Department of Psychiatry, Kings County Hospital, Brooklyn; Psychiatrist, Boro Medical Center, Brooklyn. Philosophical Library, New York. 1958. xiv-555 pages. Price $10.00.

You Can Increase Your Heart-Power. By PETER J. STEINCROHN, M.D., F.A.C.P. Doubleday & Company, Inc., Garden City, New York. 1958. 381 pages. Price $4.95.

Medical Problems in Pregnancy. Edited by Curtis J. Lund, M.D. Clinical Obstetrics and Gynecology, Volume 1, Number 1—Management of Endocrine Problems. Edited by Allan C. Barnes, M.D. A quarterly book series. Paul B. Hoeber, Inc., New York. 1958. 288 pages. Illustrated. Quarterly publication, annual subscription $18.00.

Clinical Enzymology. Edited by Gustav J. Martin, Sc. D., Research Director The National Drug Company, Philadelphia. Little, Brown and Company, Boston. 1958. 241 pages. Illustrated. Price $6.00.

Love, Skill and Mystery. A Handbook to Marriage. By THEODOR BOVET, Basel, Switzerland. Doubleday & Company, Inc., Garden City, N. Y. 1958. xiv-188 pages. Price $3.50.

A Primer on Common Functional Disorders. Practical Diagnosis and Management. By JACK W. FLEMING, M.D., Department of Internal Medicine, The Medical Center Clinic, Pensacola, Fla. Little, Brown and Company, Boston. 1958. xvi-174 pages. Illustrated. Price $5.00.

Dietary Prevention and Treatment of Heart Disease. By JOHN W. GOFMAN, M.D., Donner Laboratory, University of California, Berkeley. ALEX V. NICHOLS, Ph.D., Donner Laboratory, University of California. E. VIRGINIA DOBBIN, Senior Dietitian, E. V. Cowell Memorial Hospital, University of California. G. P. Putnam's Sons, New York. 1958. 256 pages. Price $3.95.

A History of Public Health. By GEORGE ROSEN, M.D., Ph.D., M.P.H., Professor, Health Education, School of Public Health and Administrative Medicine, Columbia University; Editor, American Journal of Public Health. Foreword by Felix Marti-Ibanez, M.D., Professor and Director of the Department of the History of Medicine, New York Medical College. MD Monographs on Medical History Number One. MD Publications, Inc., New York. 1958. 551 pages. Price $5.75.

The Preservation of Youth. Essays on Health. By Moses Ben Maimon (Maimonides). Translated from the Original Arabic (Fi Tadbir as-Sihha). With an introduction by Hirsch L. Gordon, M.D., Ph.D., D.H.L. Philosophical Library, New York. 1958. 92 pages. Price $2.75.

The Cerebrospinal Fluid. Production, Circulation and Absorption. Ciba Foundation Symposium. Editors for the Ciba Foundation—G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc. Little, Brown and Company, Boston. 1958. xii-335 pages. With 141 Illustrations. Price $9.00.

Review of Physiological Chemistry. By HAROLD A. HARPER, Ph.D., Associate Professor of Physiological Chemistry, University of California School of Medicine; etc. Lange Medical Publishers, Los Altos, California. 1957. Sixth Edition. 376 pages. Price $4.50.

Crime and Insanity. Edited by Richard W. Nice. Philosophical Library, New York. 1958. vii-280 pages. Price $6.00.

Electrocardiography. By MICHAEL BERNREITER, M.D., F.A.C.P., Assistant Clinical Professor of Medicine, University of Kansas Medical School; Chief of Electrocardiography, St. Mary's Hospital, Kansas City, Missouri; etc. J. P. Lippincott Company, Philadelphia. 1958. viii-134 pages. Price $5.00.

Correlative Neuroanatomy and Functional Neurology. By JOSEPH G. CHUSID, M.D., Attending Neurologist, St. Vincent's Hospital, New York. And JOSEPH J. McDONALD, M.S., M.Sc.D., M.D., Dean of Medical Faculty, American University of Beirut, Beirut, Lebanon. Lange Medical Publishers, Los Altos, California. 1958. Ninth Edition. 345 pages. Illustrated by Ralph Sweet. Price $4.50.

Memoirs of a G.P. By OTIS MARSHALL, M.D. Vantage Press, New York. 1958. 155 pages. Price $3.50.

Medical Electrical Equipment. Principles, Installation, Operation and Maintenance of Electrical Equipment Used in Hospitals and Clinics. Advisory Editor, Robert E. Molloy, M.D., F.F.A., R.C.S. Philosophical Library, Inc., New York. 1958. viii-312 pages. With 238 Illustrations. Price $15.00

Hello, Hello, Hello, Doc. Amusing Recollections and Anecdotes of a Country Physician. By WILLIAM W. CLEERE, M.D. Exposition Press, New York. 165 pages. Price $3.00.

How to Live with Diabetes. By HENRY DOLGER, M.D., Chief, Diabetes Clinic, Mt. Sinai Hospital, New York. And BERNARD SEEMAN. W. W. Norton & Company, Incorporated, New York. 1958. 192 pages. Price $3.50.

Therapeutic Heat. Edited by Sidney Licht, M.D., Honorary Member, British Association of Physical Medicine, Danish Society of Physical Medicine, and the French National Society of Physical Medicine Elizabeth Licht, Publisher, New Haven, Conn. 1958. xiii-466 pages. Price $12.00.

This text is a complete review of the physics and physiology of heat, and application of this fundamental information to clinical medicine. Twenty-three authors contributed to the twenty chapters dealing with physics, methods of production, measurements, thermal injuries, clinical applications, and medicolegal aspects of heat.

One of the outstanding chapters of the book is the discussion of the physiology of heat and cold by Drs. Ernst Fischer and Sidney Solomon of the Medical College of Virginia.

Although terminology, semantics, and repetition are problems in the structure of the material presented, the text represents a sound step forward in closing the gap between scientific knowledge and empiric clinical medicine. This is an excellent source book for thoroughly documented information on the therapeutic use of heat.

HERBERT W. PARK, M.D.

Chemistry and Biology of Mucopolysaccharides. Ciba Foundation Symposium. Editors for the Ciba Foundation, G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Maeve O'Connor, B.A. Little, Brown, and Company, Boston. 1958. xii-323 pages. With 48 illustrations. Price $8.50.

The Ciba Symposium on mucopolysaccharides, held in London, April 1957, was attended by thirty leading specialists in the field. Great Britain, Canada, Australia, Germany, Sweden, Switzerland and the United States were represented. Seventeen comprehensive papers were presented, followed by extensive discussions. The reader of this excellent symposium will not miss a single piece of important information, on the present status of research on mucopolysaccharides in biology and medicine. Of special interest to the medically oriented reader will be Kabat's paper on immunochemical approaches to polysaccharide and mucopolysaccharide structure; Morgan's discussion of mucopolysaccharides associated with blood-group specificity, Winzler's studies on glycoproteins of plasma and Maclagan's and Anderson's treatise on colloidal properties of urinary mucopolysaccharides.

The purely chemically inclined reader will enjoy Stacey's review of general chemistry of the mucopolysaccharides; Blumberg's and Ogston's fine account of physicochemical studies on hyaluronic acid, Dorfman's fascinating contributions on the biosynthesis of mucopolysaccharides involving the uridine nucleotides of Group A streptococci, and Klenk's survey of neuraminic acid (sialic acid). The physiologist and pharmacologist alike will benefit from Meier's contributions on pharmacological effects of polysaccharides which comprise among other information an account of the work of Meier and Schuler on the lipemia-clearing effect of bacterial lipopolysaccharides which were found to be some 1,000 times more potent than heparin and other "clearing agents".

The virologist will note with interest Gottschalk's studies (The prosthetic group of some mucoproteins and its relationship to influenza virus) on the interaction between influenza virus and certain mucoproteins which definitely pinpoint the sialic (neuraminic) acid component as the anchorage between virus and host cell membrane.

The book is recommended for the desk of the researchminded clinician as well as for reference and inspiration in the laboratory.

OLE J. MALM, M.D.

President's Message . . . .

I FEEL it is fitting that this final message from me as your President should contain my sincere thanks for the excellent cooperation I have received this year. Many of the committees have been called on for a good deal of work and have responded willingly. Some committees have not had to be active, yet I am sure they would have answered a call if the need arose. I have had to ask for assistance and advice from quite a few individual members from time to time, and almost without exception they have come through in a manner that was highly gratifying. The other officers, the members of Council, our A.M.A. and State Delegates have all shown themselves to be worthy of your confidence. I am indebted most of all to Bob Howard, Ed Smith, Spencer Watkins and Joann Tobin and the part-time assistants in the headquarters of our Society at Richmond. These loyal people keep our organization going, tie all the loose ends together, do the leg work for the officers and committees, and give us the foundation on which we build our structure. We would be in a sorry plight without them.

It seems to me we have accomplished quite a good deal this year. There is not sufficient room here to enumerate all the forward moves we have made. These will appear in the Committee reports, I am sure. As important as these steps are, however, I believe they are only stepping stones to the future and should be considered as such. Our problems are developing thick and fast. It is difficult for our officers and Council to keep abreast of them and to actually come up with answers as rapidly as needed. It isn't until one has served in this capacity that he realizes how many facets the organization has, how many problems affect us now and will affect us in the future, and how much thought should go into obtaining adequate answers to these problems.

With these ideas in mind I have one request to make of the membership. Our Society has many able men in its ranks. The officers whom you elect in future years should be carefully considered. Your presidents should be men who have demonstrated an ability to think and to act. A good knowledge of the workings of the Society is necessary. Reasonable conservatism helps. Time to devote to the job is an absolute requirement. His town of origin, his age, his political affiliation and numerous other qualifications should not stand in the way if he is well fitted for the position.

With this word of advice, and with sincere appreciation to the membership for their kind and generous assistance during the past year, I step aside and turn over this page to your new President, Dr. Walter Adams, to whom I give my wholehearted support.

H. C. Bates, Jr.

President

Editorial....

Medicare (Continued)

THE CIVILIAN MEDICARE PROGRAM which brought 90 members of the House of Delegates to Richmond on April 13 for the first special meeting of this body in the history of The Medical Society of Virginia has again become a bone of contention but this time on the national level. A brief account of the action taken in Washington appeared under "Current Currents" in the September issue of the Virginia Medical Monthly.

Several weeks ago the House of Representatives proposed that the civilian program which costs approximately $100 million during the past year should be cut to $60 million and directed the Defense Department not to exceed that figure. When the bill reached the upper house, Senator Knowland of California aided by Dr. W. J. Kennard of the Washington office of the A.M.A. was successful in having the ceiling raised to $70.2 million. The Defense Department will attempt to keep the cost within the appropriation but it now appears some latitude will be permitted.

Just how much this 30% reduction will cripple Medicare remains to be seen. Some services that were authorized in civilian hospitals and by civilian physicians have been eliminated. These include well-baby care, out-patient services for fractures and dislocation, etc. Many dependents who received care outside the military will now be required to go to service hospitals. Of interest to physicians in Northern Virginia will be a central clearing office in Washington, D. C., to determine what military facilities are available in that area.

A dependent who lives with a serviceman must use military facilities unless the military authorities certify that service care is not available. This restriction will not apply if the dependent does not live with the sponsor. In obstetrical cases a dependent who does not live with the serviceman will continue to have freedom of choice. If the dependent lives with the sponsor, new patients and those in the first trimester of pregnancy must use service facilities if available. If the pregnancy has advanced to the second or third trimester and if the dependent is receiving civilian care on October 1, a change to military facilities will not be required. If, for any reason, a change in doctors is made, military facilities must then be used if available.

The new regulations also discontinue all services "not clearly specified in the law". These discontinued services include medical care usually renderd on an out-patient basis, acute emotional disorders, and elective surgery. Emergency care may be obtained from civilian sources without prior authorization, as in the past.

This is the situation at present and it will of necessity continue on this basis until Congress re-convenes next January. What change, if any, is made at that time will depend largely on how voluble the protests become in the meantime.

H. J. W.

News Notes . . . .

New Members.

The following new members have been admitted into The Medical Society since the list published in the September issue of the Monthly:

Thomas Walter Caldroney, M.D., Newport News
Nathan Norman Cohen, M.D., Hampton
Edwin Wayne Hakala, M.D., Richmond
Fitzhugh Mayo, M.D., Virginia Beach
Manuel Ross, M.D., Clifton Forge
Frank Eugene Taylor, M.D., Roanoke
Harry Robert Yates, Jr., M.D., Roanoke
Gordon Anthony Zimmerman, M.D., Falls Church

We've Moved at Last!

This is the first issue of the Monthly to go out from the new headquarters building. The offices were moved on September 26th—we've in but not quite settled. However, everything will be in readiness for the annual meeting and the staff will have their faces washed and everything spic and span for the open house on October 12th. The Building will be open during the entire meeting and it is hoped everyone will take this opportunity to come by and inspect the building. It's your building and we hope you will be as proud of it as are the staff and officers.

For those of you who are not able to be in Richmond for the annual meeting, we plan to publish some pictures of the exterior and interior of the new building in a very early issue of the Monthly.

Dr. Walter E. Vest,

Huntington, W. Va., who has served as one of the two AMA Delegates from West Virginia since 1934, will retire after the Clinical Meeting in December. He has not missed a roll call during his tenure of office and recently attend his 40th consecutive annual meeting of the West Virginia State Medical Association. Dr. Vest is also a member of The Medical Society of Virginia, having joined in 1909.

Washington County Medical Society.

New officers for this Society are: President, Dr. S. E. Miller, Abingdon; vice-president, Dr. H. M. Hayter, Abingdon; and secretary-treasurer, Dr. J. M. Suter, Bristol.

The Washington County Medical Society meets monthly from September through June on the first Tuesday of each month at 6:00 P.M., at the Martha Washington Inn, Abingdon. All physicians are cordially invited to attend any of the meetings.

New Information Service.

An information service unique to the Southeast is being launched for physicians in North Carolina, South Carolina and Virginia. The service will feature a monthly booklet, entitled "What Goes On", which will list all medical meetings, special lectures, post-graduate courses and other events of interest in the three-state area. Distribution will be free to practicing physicians and medical faculty members.

The booklet will be prepared by the Duke University Medical Center in cooperation with medical societies and schools in the three states. Financial sponsorship will come from the Lederle Laboratories Division of the American Cyanamid Company. The first issue is tentatively scheduled for November.

Dr. Harry C. Bates, Jr.,

Arlington, has been named a member of the atomic energy study committee of the Virginia Advisory Legislative Council.

Medical Seminar for Lawyers.

The Department of Legal Medicine, Medical College of Virginia, and the Virginia State Bar announce that their two-day Medical Seminar for Lawyers dealing with personal injury problems resulting from trauma, particularly automobile accidents, will be conducted on October 17 and 18, at the Medical College of Virginia. The seminar will be limited to 100 attorneys.

The program is designed to increase the proficiency of lawyers handling litigation in which medical testimony is involved. The first day will be devoted to the basic principles of medicine and the second day the common injuries which most frequently appear in litigation will be discussed.

A staff of over 25 physicians representing all the medical disciplines will conduct the course.

For further information, write to Thomas D. Jordan, Medical Seminar for Lawyers, P. O. Box 41, MCV Station, Medical College of Virginia, Richmond 19, Virginia.

Dr. Edward M. Holmes, Jr.,

Richmond, has been assigned to the Technical Mission Branch of the International Corporation Administration in New Delhi, India. He will serve as consultant to the All India Institute of Medical Sciences and as loan professor of preventive medicine for the next two years. During this period he will be on leave of absence from the Medical College

of Virginia where he is professor of Community medicine.

Dr. Fletcher D. Woodward,

Charlottesville, has been awarded the Allstate Safety Crusade certificate of commendation for his outstanding leadership in traffic safety. The certificate is given by the Allstate Insurance Companies to carefully selected individuals and groups across the country for outstanding accident prevention efforts.

International College of Surgeons.

The mid-Atlantic section of the College will hold its annual meeting at the Homestead, Hot Springs, November 16-18. The medical profession is cordially invited to attend.

Dr. Frederick A. Clark

Has been appointed as Director of Public Health of the City of Richmond. He has been acting in this post since September of last year. Dr. Clark is a graduate of the Indiana School of Medicine. After his graduation he served with the U. S. Navy until 1956 when he came to Richmond and served as chief of the Bureau of Preventive Medical Services.

American Urological Association.

The sixteenth annual meeting of the Mid-Atlantic Section of the American Urological Association with headquarters at the Jefferson Hotel was in session on October 1-4 in this city with Dr. R. Carl Bunts of Richmond, Virginia, presiding. This important meeting was attended by urological surgeons of the Mid-Atlantic States.

Recent advances in diagnosis, treatment and surgical techniques relating to kidney disease and of the urinary organs were discussed and demonstrated as well as topics of research in this field.

Prominent guests who addressed the Association included Dr. Adolph A. Kutzmann, president of the American Urological Association, from Los Angeles, California; Dr. John L. Emmett, Rochester, Minnesota; and Dr. William J. Baker of Chicago, Illinois.

Dr. R. Carl Bunts was succeeded as president of the Mid-Atlantic Section by Dr. Charles A. Hoffman of Huntington, West Virginia.

Local members of the Association who served as hosts for the meeting included Drs. Austin I. Dodson, T. B. Washington, Charles M. Nelson, Frank Pole, Austin I. Dodson, Jr., J. Edward Hill, Garnett Link, Lewis W. Holladay, and William Russell Jones, Jr.

The Virginia Society for Pathology

And Middle Eastern Region College of American Pathologists will hold a joint meeting at the Hotel John Marshall, Richmond, December 5-6. The program will be a symposium and slide seminar on pathology and applied cytology of the Lower Respiratory Tract. Speakers will be Dr. Leopold G. Koss, Memorial Hospital, New York; Dr. Lewis B. Woolner, Mayo Clinic, Rochester; Dr. James W. Reagan, Western Reserve University, Cleveland.

Further information may be obtained from Dr. George J. Carroll, Secretary, Virginia Society for Pathology, Louise Obici Memorial Hospital, Suffolk.

Dr. L. A. Micou,

Buena Vista, announces the association of Dr. Dirk Enthoven in the practice of medicine.

Dr. Hiram W. Davis,

Commissioner of the Virginia Department of Mental Hygiene and Hospitals, Richmond, has been elected to the executive committee of the Southern Regional Council on Mental Health Training and Research.

Dr. B. Noland Carter, II,

Completed his residency at the Cincinnati General Hospital on August 31st and has returned to Richmond where he is associated with Dr. Harry J. Warthen in the practice of surgery and gynecology.

The Southeastern Allergy Association

Will hold its annual meeting on October 31st and November 1st at the Heart of Atlanta Motel. All persons interested are cordially invited to attend. Further information may be obtained from the secretary, Dr. Katharine Baylis MacInnis, 818 Albion Road, Columbia, South Carolina.

Doctor's Suite Available.

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A general practitioner for Dante, Virginia.

For information, contact Dr. W. C. Elliott, Lebanon, Virginia. (*Adv.*)

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Obituaries . . . .

Dr. Bernard Hewitt Kyle,

Prominent orthopedist of Lynchburg, died August 22nd, having been in ill health from a heart attack suffered on July 11th. He was seventy-one years of age and graduated from the Medical College of Virginia in 1911. Dr. Kyle had lived in Lynchburg since 1914 and began the practice of orthopedics in 1922. He retired from active practice in 1957. Dr. Kyle was in active service during World War I and was with the famous 12th Field Artillery, Second Division, which defeated the Prussian Guard in Belleau Wood. He was twice decorated by the French government and cited in numerous U. S. Army division orders. During World War II, he was director of the affiliated unit of local hospitals and chief of the medical emergency set-up.

Dr. Kyle was a past president of the Lynchburg Academy of Medicine. He has been a member of The Medical Society of Virginia since 1913.

His wife and a daughter survive him.

The following resolutions were adopted by the Lynchburg Academy of Medicine:

Whereas, Almighty God in His Infinite Wisdom didst remove from our midst our loyal friend and co-worker in the Art of Healing, Bernard H. Kyle, M.D., August 22, 1958. The Lynchburg Acadamy of Medicine requests that the following resolutions be spread upon the minutes of its meeting and that a copy be sent to his family and to the Virginia Medical Monthly.

Be It Therefore Resolved, That the Lynchburg Academy of Medicine, The Surounding Community, The City of Lynchburg, The Medical Society of Virginia, and his Friends, have lost a valuable member of strong character, evidenced by his high ideals, devotion to duty, and his strict moral and ethical standards.

Be It Further Known, That during his professional career he rendered valuable services to the physicians, patients and hospitals of this community.

He was a pioneer in this community in his specialty as an orthopedic surgeon, and was largely responsible for raising this specialty to its present high level.

He also rendered distinguished services to his Country in active combat with the Second Division during World War I, receiving several decorations. And in World War II, he took an active part in this community rendering valuable services.

Be It Further Resolved, That we, the members of the Lynchburg Academy of Medicine, miss him deeply, and extend to his wife, child, and family, our sincere and deepest sympathy, but that we feel that Divine Providence has supervened and taken unto Itself our beloved friend and co-worker.

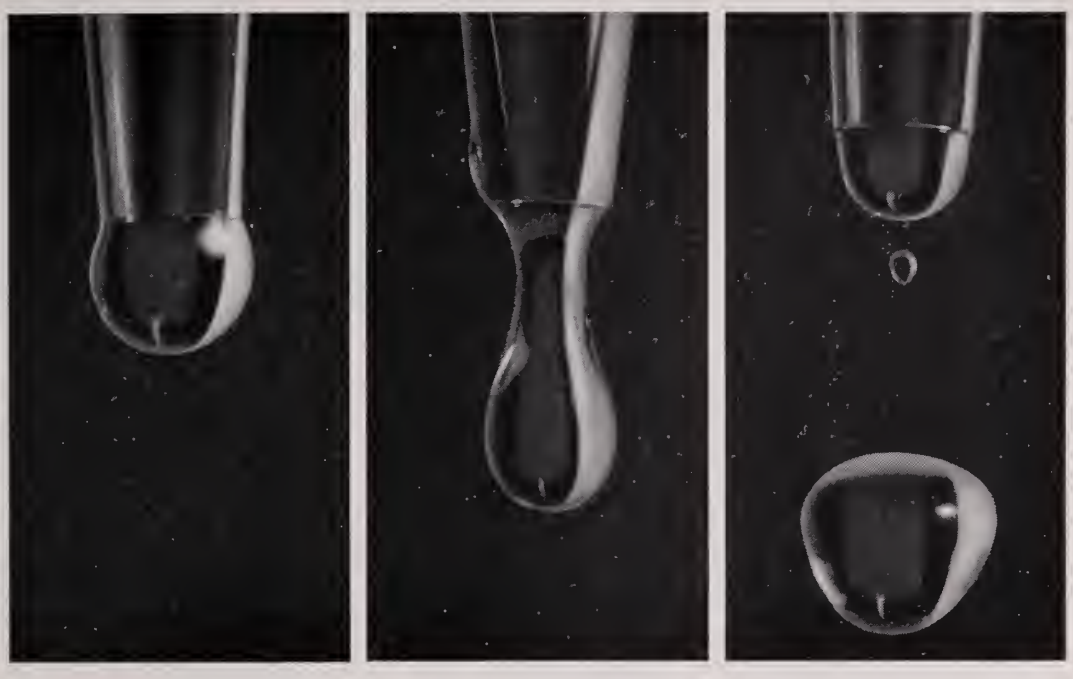
It is with sadness in our hearts that this committee hereby presents these resolutions to the Lynchburg Academy of Medicine for its approval.

James R. Gorman, M.D.
S. H. Rosenthal, M.D.
William T. Pugh, M.D.

Dr. Alexander McLeod,

Well known physician of Glen Allen, died September 2nd. He was a native of Alabama and a graduate of the former Baltimore Medical School in 1913. Dr. McLeod had been a general practitioner in the Glen Allen community for more than forty years. He served in the Army Medical Corps, with the rank of Captain, during World War I. He was a Mason and had been a member of The Medical Society of Virginia thirty-three years.

His wife, three sons and a daughter survive him.



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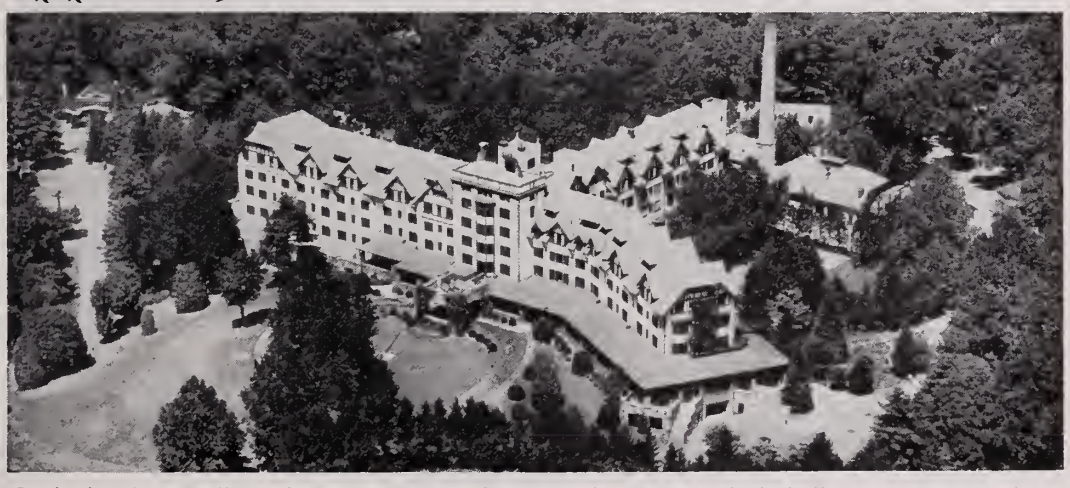
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The State Board of Medical Examiners of Virginia

The next meeting of the Virginia Board of Medical Examiners will be held in the Richmond Hotel, Richmond, Virginia, December 3, 1958. The examinations will be held in the same hotel December 4-6, 1958, inclusive. All applications and other documents pertaining to the examinations or to matters to be discussed by the Board must be on file in the Secretary's office on or before November 10, 1958. The Secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.

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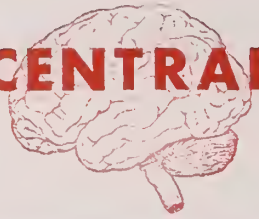
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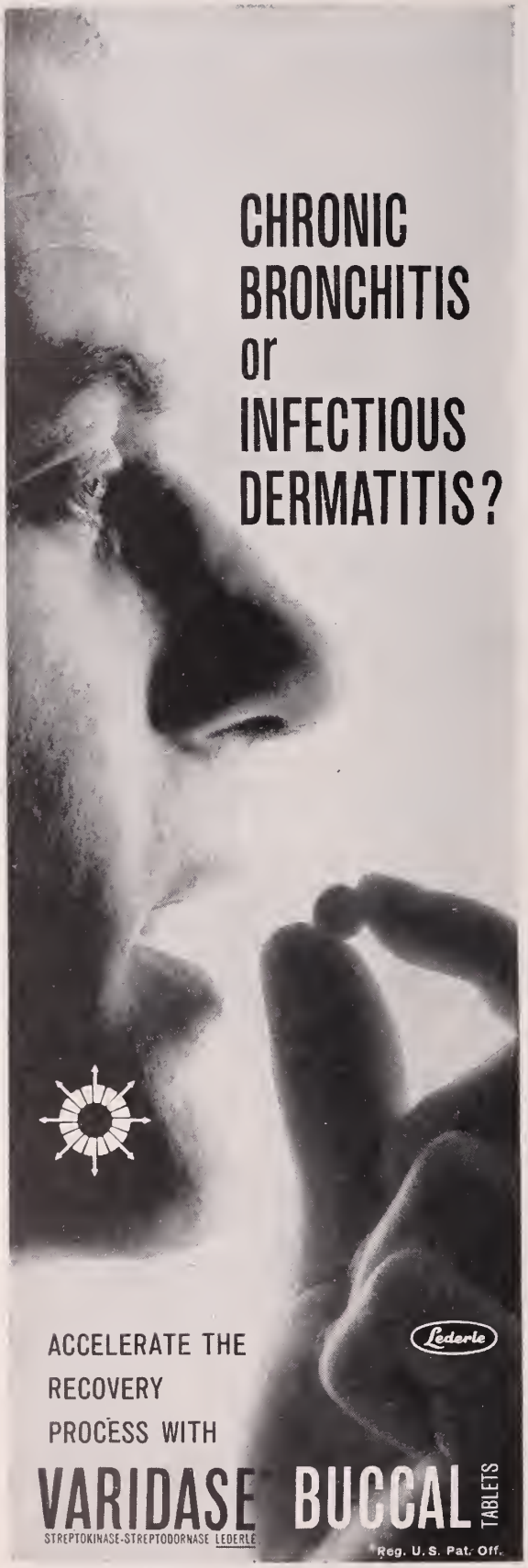
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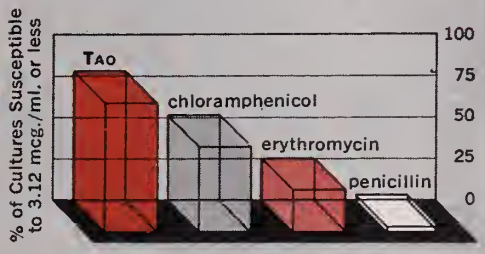
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References: 1. English, A. R., and Fink, F. C.: Antibiotics & Chemother. (Aug.) 1958. 2. English, A. R., and McBride, T. J.: Antibiotics & Chemother. (Aug.) 1958. 3. Wennersten, J. R.: Antibiotic Med. & Clin. Therapy (Aug.) 1958. 4. Celmer, W. D., et al.: Antibiotics Annual 1957-1958, New York, Medical Encyclopedia, Inc., 1958, p. 476.

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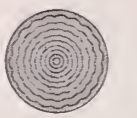
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FORD, R. V., Rochelle, J.B.III, Handley, C. A., Moyer, J. H. and Spurr, C. L.: J.A.M.A. **166**:129, Jan. 11, 1958.

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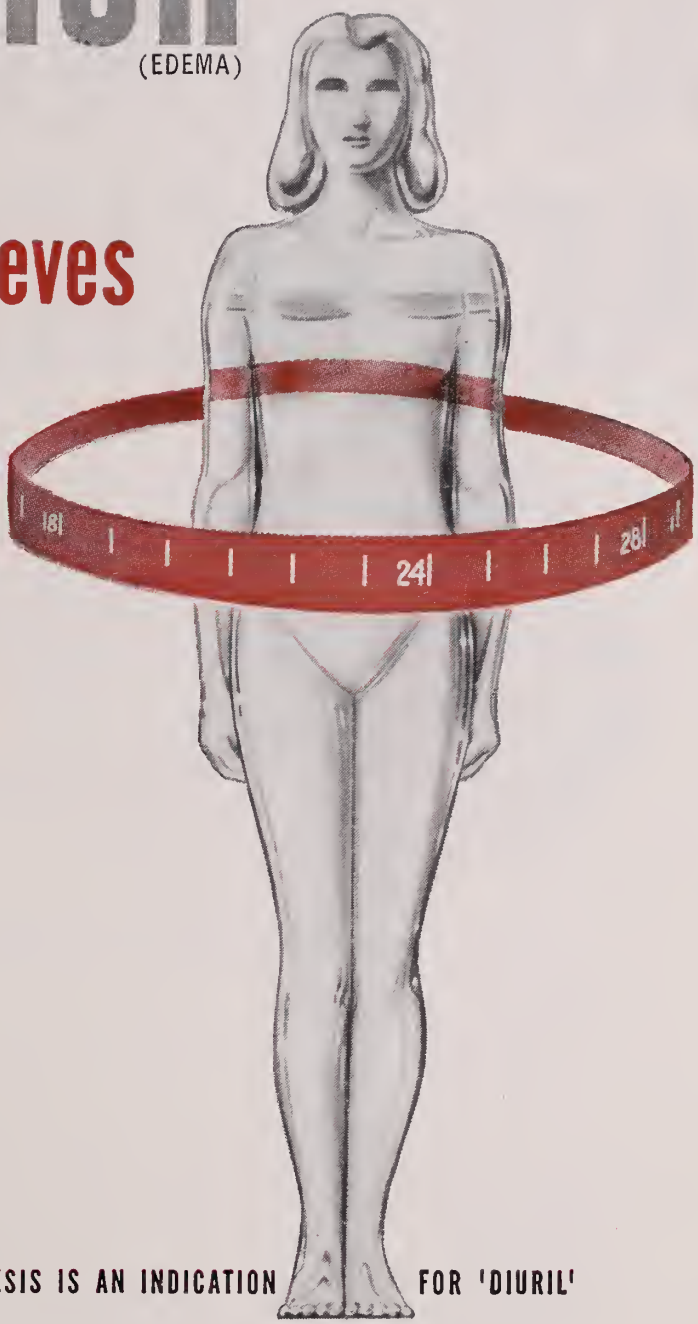
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1. *Friedlander, H. S.: The role of ataraxics in cardiology. Am. J. Card.* **1**:*395, March 1958.*
2. *Shapiro, S.: Observations on the use of meprobamate in cardiovascular disorders. Angiology* **8**:*504, Dec. 1957.*

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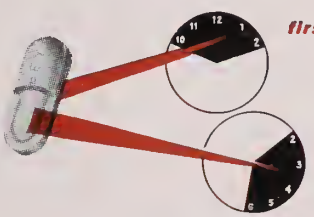
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references:
1 Grieble, H.G., and Jackson, G.G.: Prolonged Treatment of Urinary-Tract Infections with Sulfamethoxypyridazine. *New England J. Med.* 258:1-7, 1958
2. Editorial *New England J. Med.* 258:48-49, 1958.

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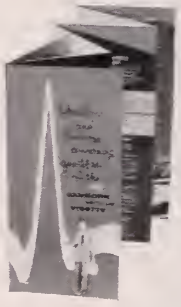


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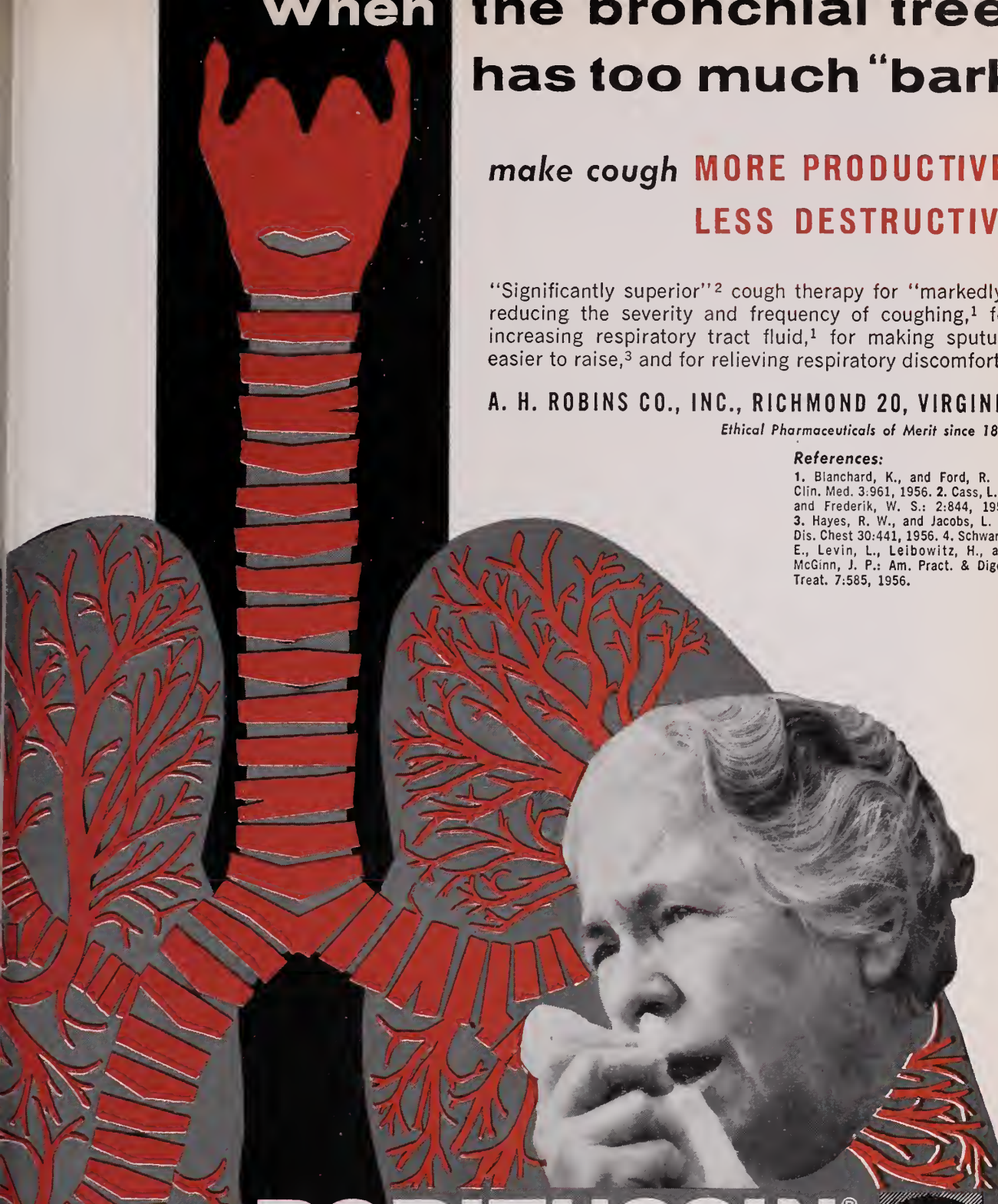
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1. Blanchard, K., and Ford, R. A.: Clin. Med. 3:961, 1956. **2.** Cass, L. J., and Frederik, W. S.: 2:844, 1951. **3.** Hayes, R. W., and Jacobs, L. S.: Dis. Chest 30:441, 1956. 4. Schwartz, E., Levin, L., Leibowitz, H., and McGinn, J. P.: Am. Pract. & Digest Treat. 7:585, 1956.



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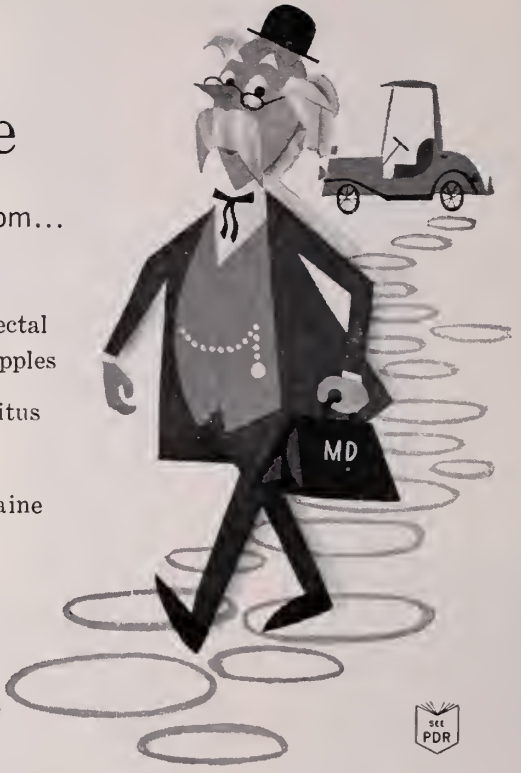
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5. Clyman, S. G.: Postgrad. Med. *21*:309, 1957.



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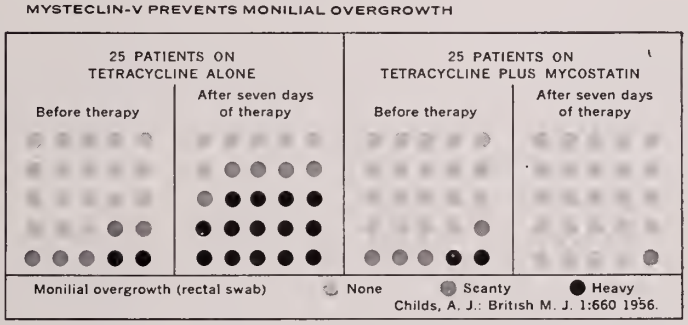
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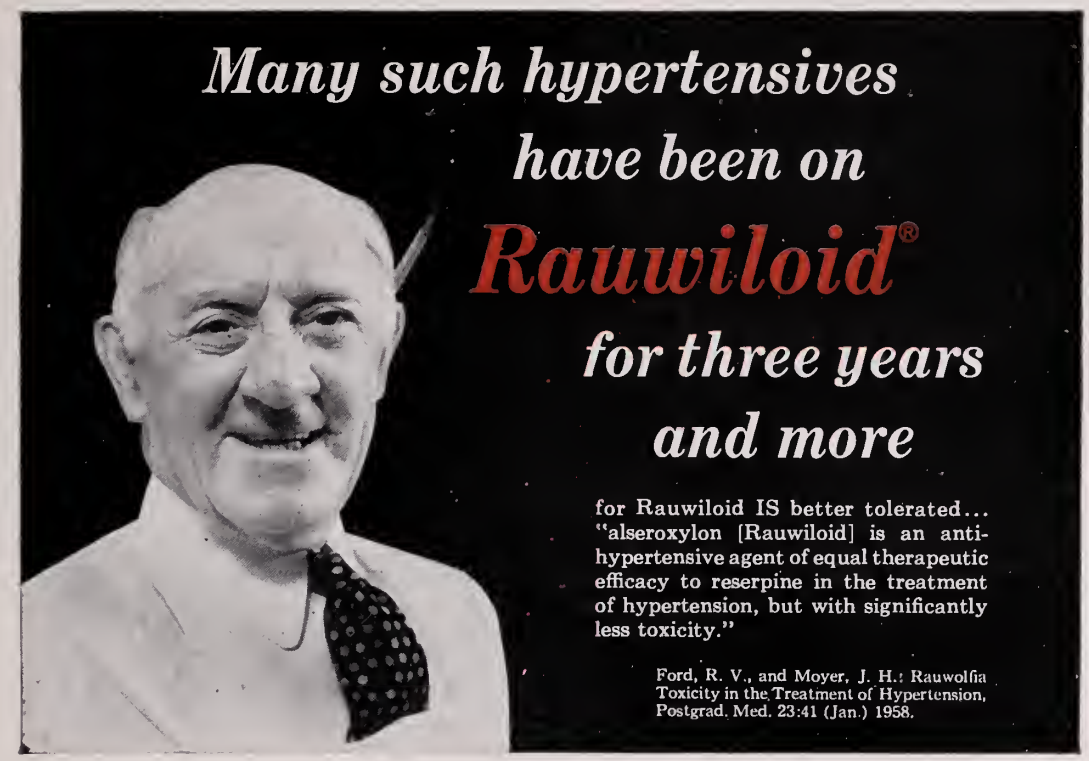
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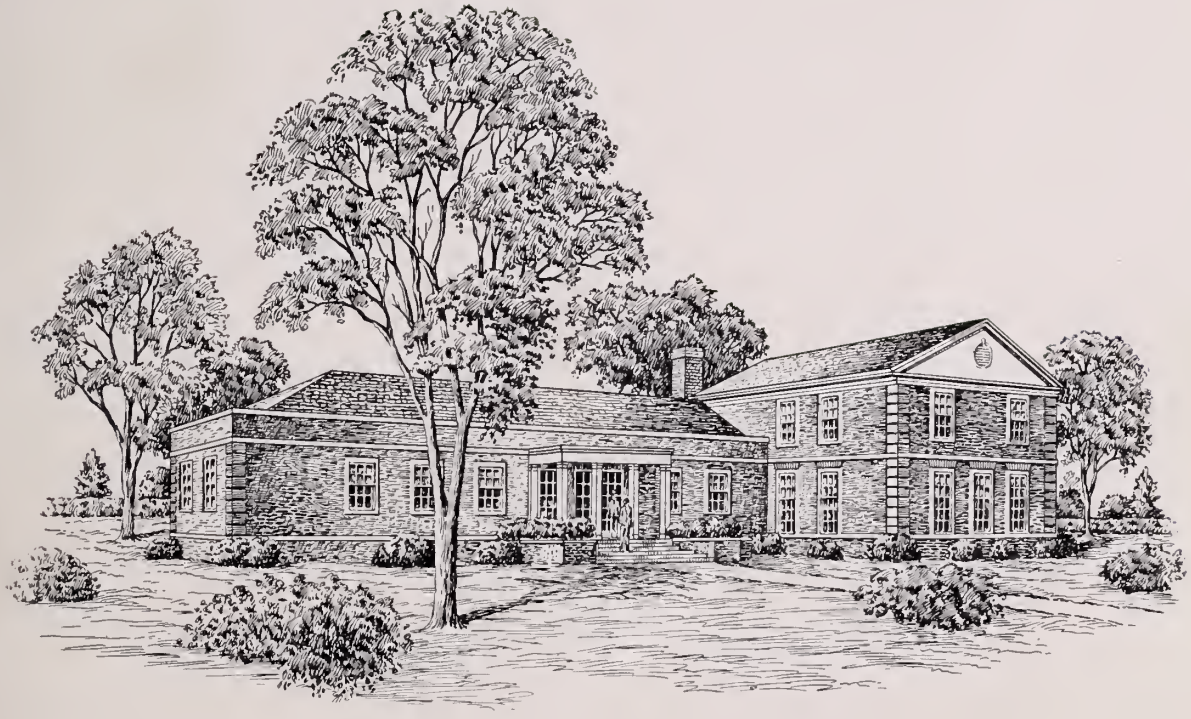
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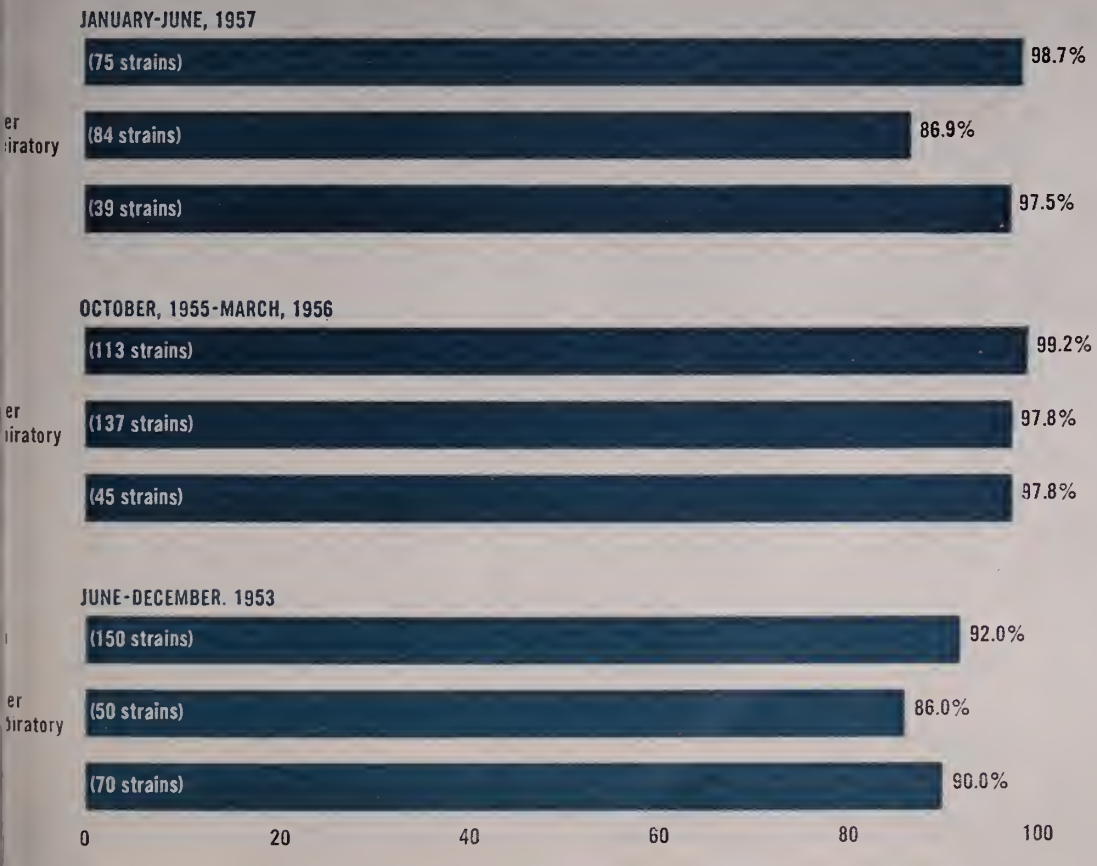
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(1) Hagedorn, A. B.: Proc. Staff Meet. Mayo Clin. 32:705 (Dec. 11) 1957.
(2) Best, W. R.; Louis, J., and Limarzi, L. R.: M. Clin. North America (Jan.) 1958, p. 3.

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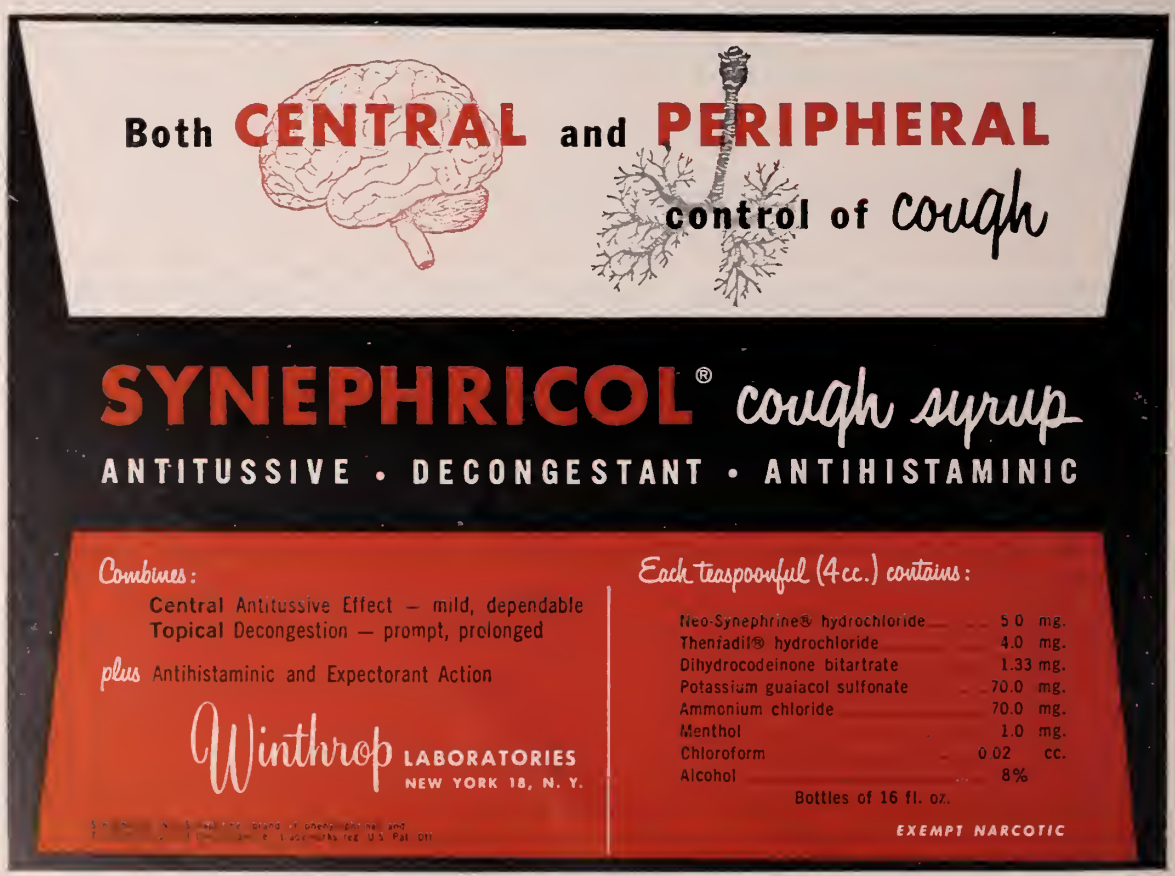
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The anabolic effects of Nilevar are quickly manifest both to the patient and to the attending physician.

When loss of nitrogen delays postsurgical recovery or stalls convalescence after acute illness and in severe burns and trauma, Nilevar has been found to effect these responses:

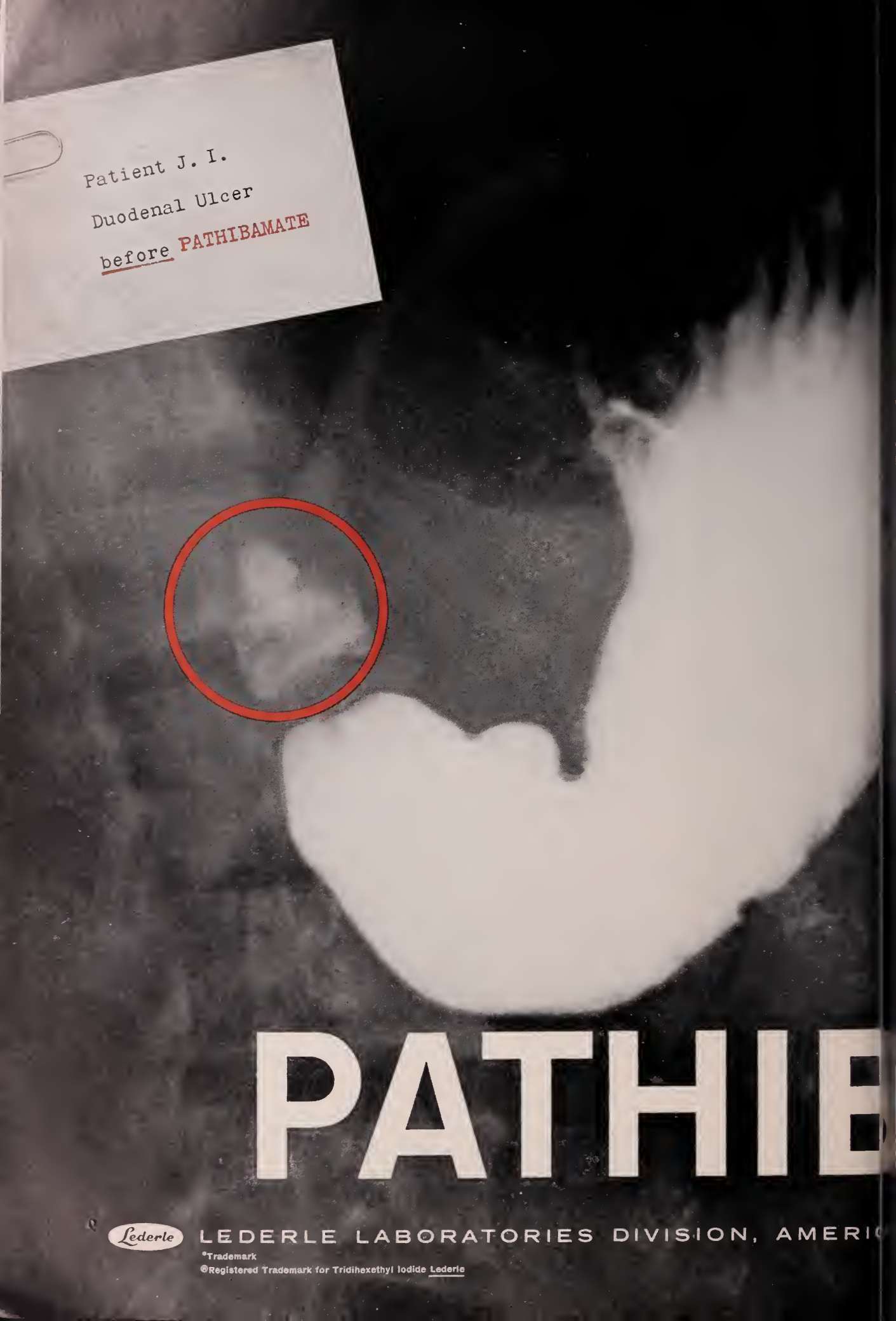
- **Appetite improves**
- **Weight increases**
- **The patient feels better**
- **The patient recovers faster**

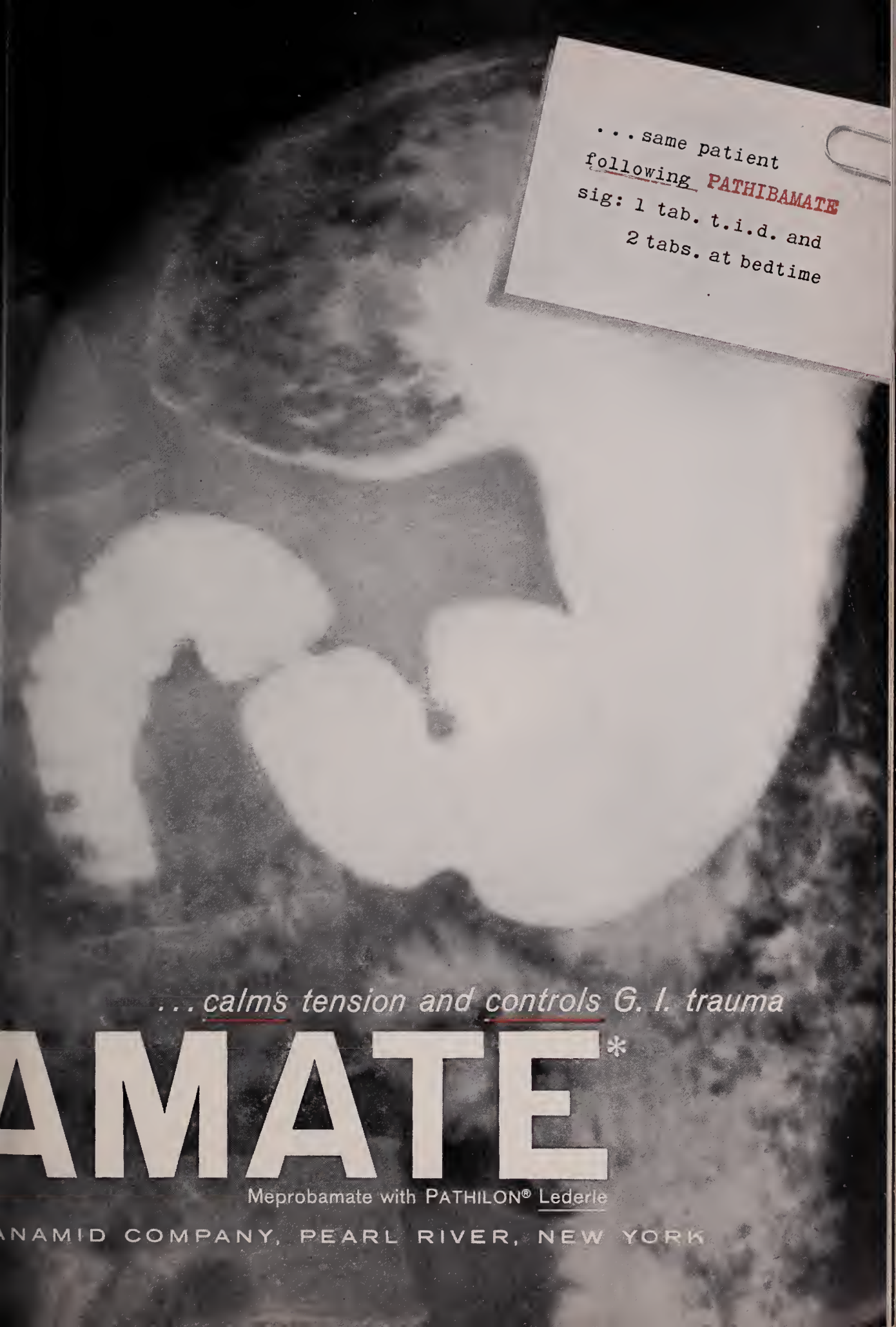
Similarly Nilevar helps correct the "protein catabolic state" associated with prolonged bed rest in carcinomatosis, tuberculosis, anorexia nervosa and other chronic wasting diseases.

Nilevar is unique among anabolic steroids in that androgenic side action is minimal or absent in appropriate dosage.

Nilevar (brand of norethandrolone) is supplied as tablets of 10 mg. and ampuls (1 cc.) of 25 mg. The dosage for adults is 20 to 30 mg. daily in single courses no longer than three months. For children the daily dosage is 0.5 mg. per kilogram of body weight, in single courses no longer than three months.

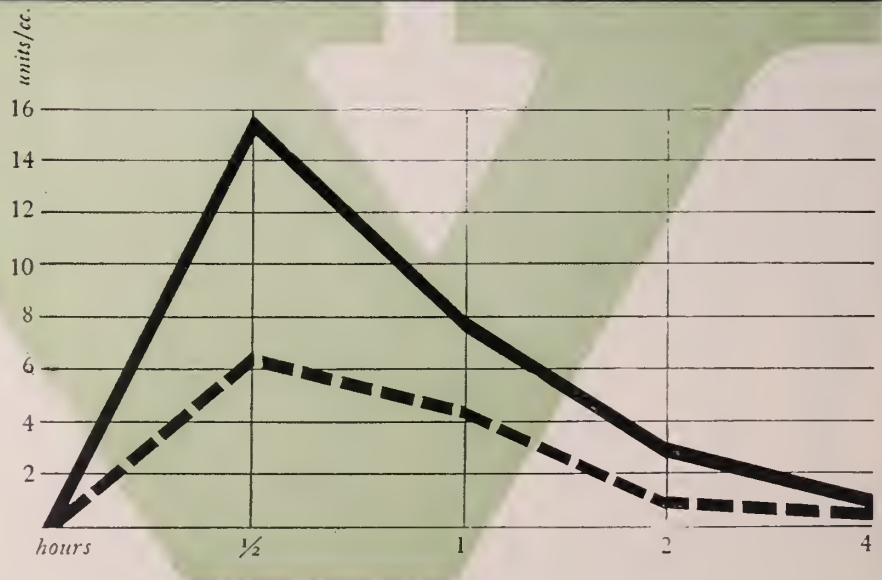
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Patient J. I.
Duodenal Ulcer
before PATHIBAMATE
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following PATHIBAMATE
sig: 1 tab. t.i.d. and
2 tabs. at bedtime
. . . calms tension and controls G. I. trauma
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NAMID COMPANY, PEARL RIVER, NEW YORK

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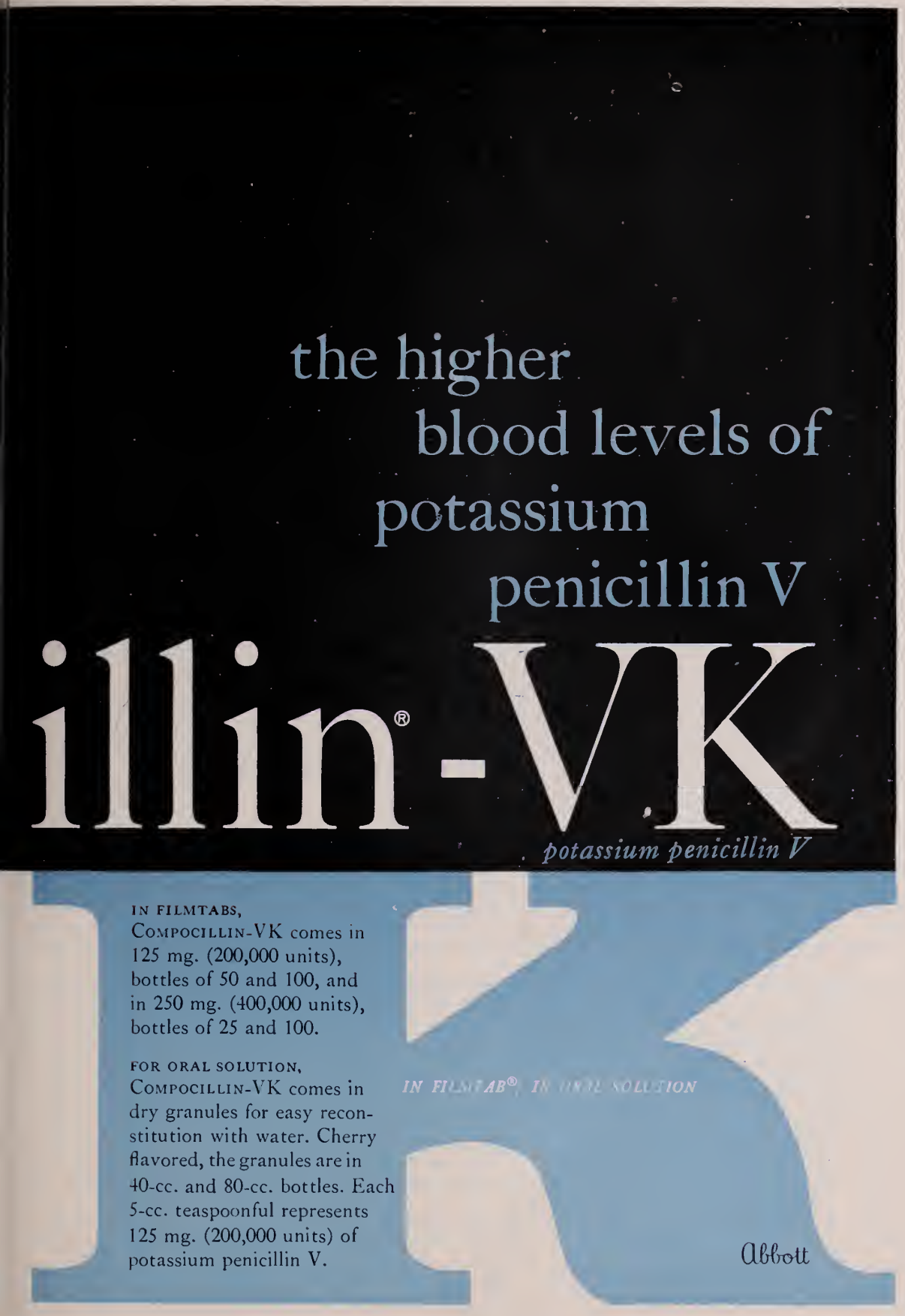


The highest levels of Filmtab Compocillin-VK.

The median levels of Filmtab Compocillin-VK.

Note the high upper levels and averages at ½ hour, and at 1 hour.

Doses of 400,000 units were administered before mealtime to 40 subjects involved in this study.


the higher
blood levels of
potassium
penicillin V
illin®-VK
potassium penicillin V
IN FILMTABS,
COMPOCILLIN-VK comes in 125 mg. (200,000 units), bottles of 50 and 100, and in 250 mg. (400,000 units), bottles of 25 and 100.
FOR ORAL SOLUTION,
COMPOCILLIN-VK comes in dry granules for easy reconstitution with water. Cherry flavored, the granules are in 40-cc. and 80-cc. bottles. Each 5-cc. teaspoonful represents 125 mg. (200,000 units) of potassium penicillin V.
IN FILMTAB®, IN ORAL SOLUTION
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as a local anesthetic
or a topical anesthetic

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Xylocaine HCl solution, the versatile anesthetic for general office surgery, relieves pain promptly and effectively with adequate duration of anesthesia. It is safe and predictable. Local tissue reactions and systemic side effects are rare. Supplied in 20 cc. and 50 cc. vials; 0.5%, 1% and 2% without epinephrine and with epinephrine 1:100,000; also in 2 cc. ampules; 2% without epinephrine and with epinephrine 1:100,000.

XYLOCAINE® HCl SOLUTION
(brand of lidocaine*)

Astra Pharmaceutical Products, Inc., Worcester 6, Mass., U.S.A.

SEE PDR

*U.S. PAT. NO. 2,441,498 MADE IN U.S.A.

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Tao*

PRONOUNCED TAY-O

(brand of triacetyloleandomycin with glucosamine)

Capsules / Oral Suspension

designed for effective control of common gram-positive infections

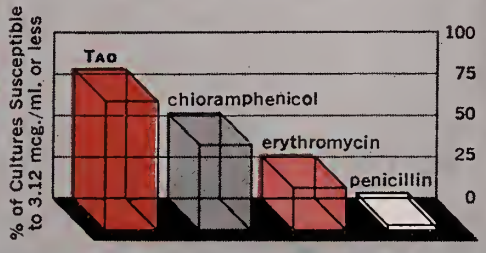
effective . . .

CLINICAL RESULTS	adults	children	all Staph infections
Cured	172 (80%)	148 (89%)	71 (88%)
Improved	28 (13%)	8 (5%)	7 (9%)
Failure	17 (7%)	11 (6%)	3 (3%)

Types of infecting organisms: The majority of identified etiologic microorganisms were Staph. aureus and Staph. albus. Tao has its greatest usefulness against organisms such as: staphylococci (including strains resistant to other antibiotics), streptococci (beta-hemolytic strains, alpha-hemolytic strains and enterococci), pneumococci, gonococci, Hemophilus influenzae.

even against resistant staph[1,2] . . .

Per cent of "antibiotic-resistant" epidemic staphylococci cultures susceptible to Tao, erythromycin, penicillin and chloramphenicol.[1]



well tolerated . . .

REACTIONS:

(a) adults	(b) children
Total—9.2% (20 out of 217)	Total—0.6% (1 out of 167)
Skin rash—1.4% (3 out of 217)	Skin rash—none
Gastrointestinal—7.8% (17 out of 217)	Gastrointestinal—0.6% (1 out of 167)

There was complete freedom from adverse reactions in 94.5% of all patients. Side effects in the other 5.5% were usually mild and seldom required discontinuance of therapy.

plus . . . stability in gastric acid • rapid, high and sustained blood levels • high urinary concentrations • outstanding palatability in a liquid preparation.

Dosage and Administration: Dosage varies according to the severity of the infection. For adults, the average dose is 250 mg. q.i.d.; to 500 mg. q.i.d. in more severe infections. For children 8 months to 8 years of age, a daily dose of approximately 30 mg./Kg. body weight in divided doses has been found effective. Since Tao is therapeutically stable in gastric acid, it may be administered at any time, without regard to meals.

Supplied: Tao Capsules—250 mg. and 125 mg.; bottles of 60. Tao for Oral Suspension—1.5 Gm.; 125 mg. per teaspoonful (5 cc.) when reconstituted; unusually palatable cherry flavor; 2 oz. bottle.

References: 1. English, A. R., and Fink, F. C.: Antibiotics & Chemother. (Aug.) 1958. 2. English, A. R., and McBride, T. J.: Antibiotics & Chemother. (Aug.) 1958. 3. Wennersten, J. R.: Antibiotic Med. & Clin. Therapy (Aug.) 1958. 4. Celmer, W. D., et al.: Antibiotics Annual 1957-1958, New York, Medical Encyclopedia, Inc., 1958, p. 476.

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Division, Chas. Pfizer & Co., Inc. SCIENCE FOR THE WORLD'S WELL-BEING

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proven effective
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clinical studies

■ does not impair mental efficiency or physical performance ■ relieves both mental and muscular tension ■ does not affect autonomic function

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meprobamate (Wallace)

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Clinical studies[1] *show:*

- 'Delvex' is effective orally, usually within five days, against four of the five most common worm infections:

Pinworm	Whipworm
Roundworm	Strongyloidiasis

- It also inhibits, and sometimes eliminates, hookworm infection.
- It is fully effective in both single and multiple infections and in both heavy and light infections.
- It eliminates pinworm infection in 100 percent of patients.
- It is the first effective and practicable agent for the oral treatment of strongyloidiasis and whipworm infection.
- No adjunctive measures are needed with 'Delvex' therapy.

Further information and clinical reports may be obtained from your Lilly representative or by writing to our Medical Department.

*'Delvex' (Dithiazanine Iodide, Lilly)

1. Swartzwelder, J. C., et al.: J. A. M. A., 165:2063, 1957.

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Comments by investigators on

Robaxin®

(Methocarbamol Robins, U.S. Pat. No. 2770649)

Robins

—the remarkably efficient skeletal muscle relaxant, unique in chemical formulation, and outstanding for sustained action and relative freedom from adverse side effects.

PUBLISHED REFERENCES: 1. Carpenter, E. B.: Southern Medical Journal 51:627, 1958. 2. Forsyth, H. F.: J.A.M.A. 167:163, 1958. 3. Little, J. M., and Truitt, E. B., Jr.: J. Pharm. & Exper. Therap. 119:161, 1957. 4. Morgan, A. M., Truitt, E. B., Jr., and Little, J. M.: J. Am. Pharm. Assn., Sci. Ed. 46:374, 1957. 5. O'Doherty, D. S., and Shields, C. D.: J.A.M.A. 167:160, 1958. 6. Park, H. W.: J.A.M.A. 167:168, 1958. 7. Truitt, E. B., Jr., and Patterson, R. B., Proc. Soc. Exper. Bio. & Med. 95:422, 1957. 8. Truitt, E. B., Jr., Patterson, R. B., Morgan, A. M., and Little, J. M.: J. Pharm. & Exper. Therap. 119:189, 1957.

Supply: Tablets (white, scored), 0.5 Gm., bottles of 50 and 500.

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Ethical Pharmaceuticals of Merit since 1878

Summary of four new published clinical studies:

Robaxin Beneficial in 95.6% of Cases of Acute Skeletal Muscle Spasm[1, 2, 5, 6]

CONDITION	NO. PATIENTS	RESPONSE			
STUDY 1[1]		"marked"	moderate	slight	none
Skeletal muscle spasm secondary to acute trauma	33	26	6	1	—
STUDY 2[2]		"pronounced"			
Herniated disc	39	25	13	—	1
Ligamentous strains	8	4	4	—	—
Torticollis	3	3	—	—	—
Whiplash injury	3	2	1	—	—
Contusions, fractures, and muscle soreness due to accidents	5	3	2	—	—
STUDY 3[5]		"excellent"			
Herniated disc	8	6	2	—	—
Acute fibromyositis	8	8	—	—	—
Torticollis	1	—	—	1	—
STUDY 4[6]		"significant"			
Pyramidal tract and acute myalgic disorders	30	27	—	2	1
TOTALS	138	104 (75.3%)	28 (20.3%)	4	2



THE JOURNAL
American Medical Association

"In the author's clinical experience, methocarbamol has afforded greater relief of muscle spasm and pain for a longer period of time without undesirable side effects or toxic reactions than any other commonly used relaxants . . ."[2]

THE JOURNAL
American Medical Association

"An excellent result, following methocarbamol administration, was obtained in all patients with acute skeletal muscle spasm."[5]

THE JOURNAL
American Medical Association

"In no instance was there any significant reduction in voluntary strength or intensity of simple reflexes."[6]

Southern Medical Journal

"This study has demonstrated that methocarbamol (Robaxin) is a superior skeletal muscle relaxant in acute orthopedic conditions."[1]



Bed of Digitalis purpurea
with Campanula (Canterbury Bells) in foreground

Not far from here are manufactured
from the powdered leaf
Pil. Digitalis (Davies, Rose)
0.1 Gram (1½ grains) or 1 U.S.P. Digitalis Unit.
They are physiologically standardized,
with an expiration date on each package.
Being Digitalis in its completeness,
this preparation comprises the
entire therapeutic value of the drug.
It provides the physician with a safe and effective
means of digitalizing the cardiac patient
and of maintaining the necessary saturation.
Security lies in prescribing the
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D 27



Hospital practice of infant feeding

Self-regulated schedules

The newborn may become a feeding problem if the formula is excessive or if he is awakened to be fed forcefully.

The young infant may balk at new food or procedure. The older infant, devoted to his bottle, may resent weaning—it takes a certain readiness for weaning to make the change agreeable. Later, the infant may become somewhat independent and arbitrary—what he enjoyed yesterday he rejects today.

WHOLE MILK FORMULAS

Age Months	Whole Milk Fluid Oz.	Water Oz.	Karo Syrup Tbsp.	Each Feeding Oz.	Number of Feedings in 24 Hours	Total Calories
Birth	10	10	2	3	6	320
1	12	13	3	4	6	532
2	15	13	3	4½	6	480
3	17	9	3	5	5	520
4	20	11	3½	6	5	610
5	23	11	4	6½	5	700
6	26	10	4	7	5	760
7	28	11	3	7½	5	740
8	30	11	2½	8	5	750
10	32	9	2	8	5	760
12	32	9	0	8	5	640

EVAPORATED MILK FORMULAS

Age Months	Evaporated Milk Fluid Oz.	Water Oz.	Karo Syrup Tbsp.	Each Feeding Oz.	Number of Feedings in 24 Hours	Total Calories
Birth	6	12	2	3	6	380
1	8	16	3	4	6	532
2	9	14	3	4½	5	576
3	10	15	3½	5	5	650
4	12	18	4	6	5	768
5	12	21	4	6½	5	768
6	13	22	4	7	5	812
7	14	21	3	7	5	796
8	15	20	2	7	5	780
10	16	16	1	8	4	764
12	16	16	0	8	4	704

When a feeding problem is in the making, sensible decorum will solve it. Nature invites infant feeding cooperation through hunger. If hunger is appeased on demand rather than by clock there will be fewer problems—the baby is the best judge of when he wants food and how much.

Feeding must be adapted to the infant individually to make it a pleasurable experience. This is the current objective in successful infant feeding formulated for normal infants in the charts below:

ADVANTAGES OF KARO® SYRUP IN INFANT FEEDING

Composition: Karo Syrup is a superior dextrin-maltose-dextrose mixture because the dextrins are non-fermentable and the maltose is rapidly transformed into dextrose which requires no digestion.



Concentration: Volume for volume Karo Syrup furnishes twice as many calories as similar milk modifiers in powdered form.

Purity: Karo Syrup is processed at sterilizing temperatures, sealed for complete hygienic protection and devoid of pathogenic organisms.

Low Cost: Karo Syrup costs 1/5 as much as expensive milk modifiers and is available at all food stores.

Free to Physicians—Book of Infant Feeding Formulas with convenient schedule pads. Write: Karo Infant Feeding Guide, Box 280, New York 46, N. Y.

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Investigator

after investigator repor

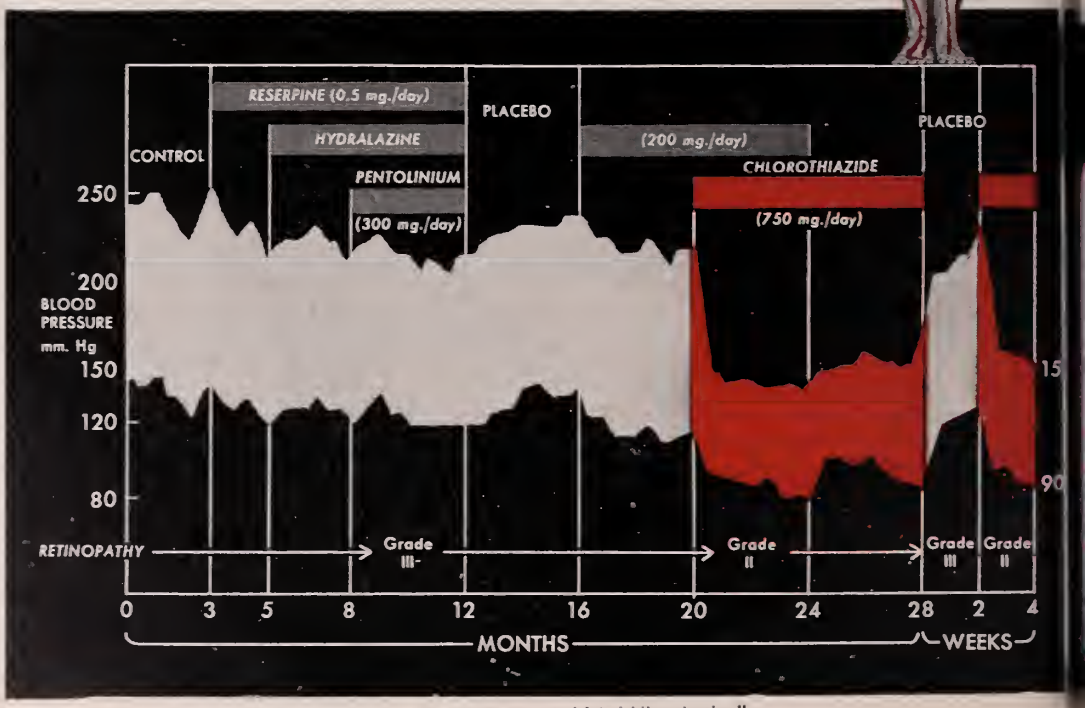
Wilkins, R. W.: New England J. Med. 257:1026, Nov. 21, 1957.

"Chlorothiazide added to other antihypertensive drugs reduced the blood pressure in 19 of 23 hypertensive patients." "All of 11 hypertension subjects in whom splanchnicectomy had been performed had a striking blood pressure response to oral administration of chlorothiazide." ". . . it is not hypotensive in normotensive patients with congestive heart failure, in whom it is markedly diuretic; it is hypotensive in both compensated and decompensated hypertensive patients (in the former without congestive heart failure, it is not markedly diuretic, whereas in the latter in congestive heart failure, it is markedly diuretic). . . ."



Freis, E. D., Wanko, A., Wilson, I. H. and Parrish, A. E.: J.A.M.A. 166:137, Jan. 11, 1958.

"Chlorothiazide (maintenance dose, 0.5 Gm. twice daily) added to the regimen of 73 ambulatory hypertensive patients who were receiving other antihypertensive drugs as well caused an additional reduction [16%] of blood pressure." "The advantages of chlorothiazide were (1) significant antihypertensive effect in a high percentage of patients, particularly when combined with other agents, (2) absence of significant side effects or toxicity in the dosages used, (3) absence of tolerance (at least thus far), and (4) effectiveness with simple 'rule of thumb' oral dosage schedules."



In "Chlorothiazide: A New Type of Drug for the Treatment of Arterial Hypertension," Hollander, W. and Wilkins, R. W.: Boston Med. Quart. 8: 1, September, 1957.

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e effectiveness of 'DIURIL'
(CHLOROTHIAZIDE)

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Hypertension

as simple as 1-2-3

1 **INITIATE THERAPY WITH 'DIURIL'.** 'DIURIL' is given in a dosage range of from 250 mg. twice a day to 500 mg. three times a day.

2 **ADJUST DOSAGE OF OTHER AGENTS.** The dosage of other antihypertensive medication (reserpine, veratrum, hydralazine, etc.) is adjusted as indicated by patient response. If the patient is established on a ganglionic blocking agent (e.g., 'INVERSINE') this should be continued, but the total daily dose should be immediately reduced by as much as 25 to 50 per cent. This will reduce the serious side effects often observed with ganglionic blockade.

3 **ADJUST DOSAGE OF ALL MEDICATION.** The patient must be frequently observed and careful adjustment of all agents should be made to determine optimal maintenance dosage.

SUPPLIED: 250 mg. and 500 mg. scored tablets 'DIURIL' (chlorothiazide); bottles of 100 and 1,000.

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A real treat . . .
the children's favorite . . .
tops with adults, too.

Each nugget contains:

Vitamin A	5,000 Units*
Vitamin D	1,000 Units*
Vitamin C	75 mg.
Vitamin E	2 Units†
Vitamin B-1	2.5 mg.
Vitamin B-2	2.5 mg.
Vitamin B-6	1 mg.
Vitamin B-12 Activity	3 mcg.
Panthenol	5 mg.
Nicotinamide	20 mg.
Folic Acid	0.1 mg.
Biotin	30 mcg.
Rutin	12 mg.
Calcium Carbonate	125 mg.
Boron	0.1 mg.
Cobalt	0.1 mg.
Fluorine	0.1 mg.
Iodine	0.2 mg.
Magnesium	3.0 mg.
Manganese	1.0 mg.
Molybdenum	1.0 mg.
Potassium	2.5 mg.

*U.S.P. Units †I.U. Units

Dose: One Nugget per day
Supplied: Boxes of 30—one month's supply
Boxes of 90—three months' supply or family package.

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15 cc.



Convenient plastic, unbreakable squeeze bottle. Leakproof, delivers a fine mist.



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Neomycin (sulfate) 1 mg./cc.
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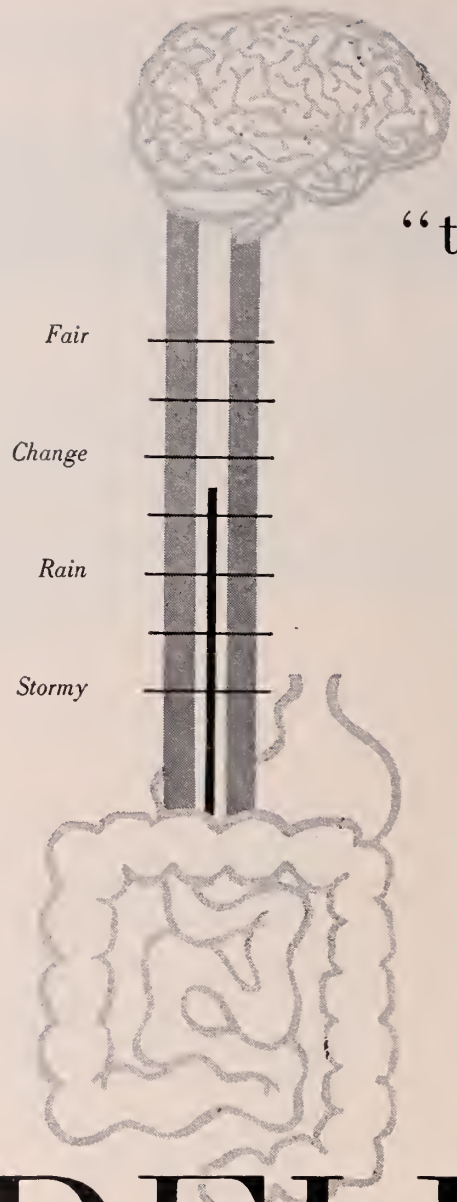
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Belbarb
soothes the agitated mind
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20 years of clinical satisfaction

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Now—the most widely prescribed tranquilizer[1] in sustained release capsules

Meprospan*

meprobamate (Miltown®) capsules



q. 12 h.

Two capsules on arising **last all day**
Two capsules at bedtime **last all night**
relieve nervous tension on a *sustained* basis, without between-dose interruption

"The administration of meprobamate in sustained action form [Meprospan] produced a more uniform and sustained action . . . these capsules offer effectiveness at reduced dosage."[2]

Dosage: 2 Meprospan capsules q. 12 h.
Supplied: 200 mg. capsules, bottles of 30.

1. Meprobamate is more widely prescribed than any other tranquilizer. Source: Independent research organization; name on request.
2. Baird, H. W., III: A comparison of Meprospan (sustained action meprobamate capsule) with other tranquilizing and relaxing agents in children. Submitted for publication, 1958.

Literature and samples on request

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The Achievements of Aristo

...in Skin Diseases: In a study of 26 patients with severe dermatoses, ARISTOCORT was proved to have potent anti-inflammatory and antipruritic properties, even at a dosage only ⅔ that of prednisone[1]... Striking affinity for skin and tremendous potency in controlling skin disease, including 50 cases of psoriasis, of which over 60% were reported as *markedly improved*[2]...absence of serious side effects specifically noted.[1, 2, 3]

...in Rheumatoid Arthritis: Impressive therapeutic effect in most cases of a group of 89 patients[4]... 6 mg. of ARISTOCORT corresponded in effect to 10 mg. of prednisone daily (in addition, gastric ulcer which developed during prednisone therapy in 2 cases disappeared during ARISTOCORT therapy).[5]

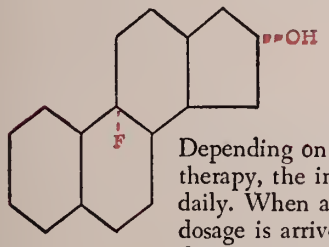
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11. Segal, M. S.: Personal Communication.
12. Cooke, R. A.: Personal Communication.
13. Dubois, E. L.: Personal Communication.

ocort®

Triamcinolone LEDERLE

...in Respiratory Allergies: "Good to excellent" results in 29 of 30 patients with chronic intractable bronchial asthma at an average daily dosage of only 7 mg.[6]... Average dosage of 6 mg. daily to control asthma and 2 to 6 mg. to control allergic rhinitis in a group of 42 patients, with an actual reduction of blood pressure in 12 of these.[7]

...in Other Conditions: Two failures, 4 partial remissions and 8 cases with complete disappearance of abnormal chemical findings lead to characterization of ARISTOCORT as possibly the most desirable steroid to date in treatment of the nephrotic syndrome.[8,9]... Prompt decrease in the cyanosis and dyspnea of pulmonary emphysema and fibrosis, with marked improvement in patients refractory to prednisone.[10,11,12]... Favorable response reported for 25 of 28 cases of disseminated lupus erythematosus.[13]



Depending on the acuteness and severity of the disease under therapy, the initial dosage of ARISTOCORT is usually from 8 to 20 mg. daily. When acute manifestations have subsided, maintenance dosage is arrived at gradually, usually by reducing the total daily dosage 2 mg. every 3 days until the smallest dosage has been reached which will suppress symptoms.

Comparative studies of patients changed to ARISTOCORT from prednisone indicate a dosage of ARISTOCORT lower by about ⅓ in rheumatoid arthritis, by ⅓ in allergic rhinitis and bronchial asthma, and by ⅓ to ½ in inflammatory and allergic skin diseases. With ARISTOCORT, no precautions are necessary in regard to dietary restriction of sodium or supplementation with potassium.

ARISTOCORT is available in 2 mg. scored tablets (pink), bottles of 30; and 4 mg. scored tablets (white), bottles of 30 and 100.

Lederle LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK

In potentially serious infections...

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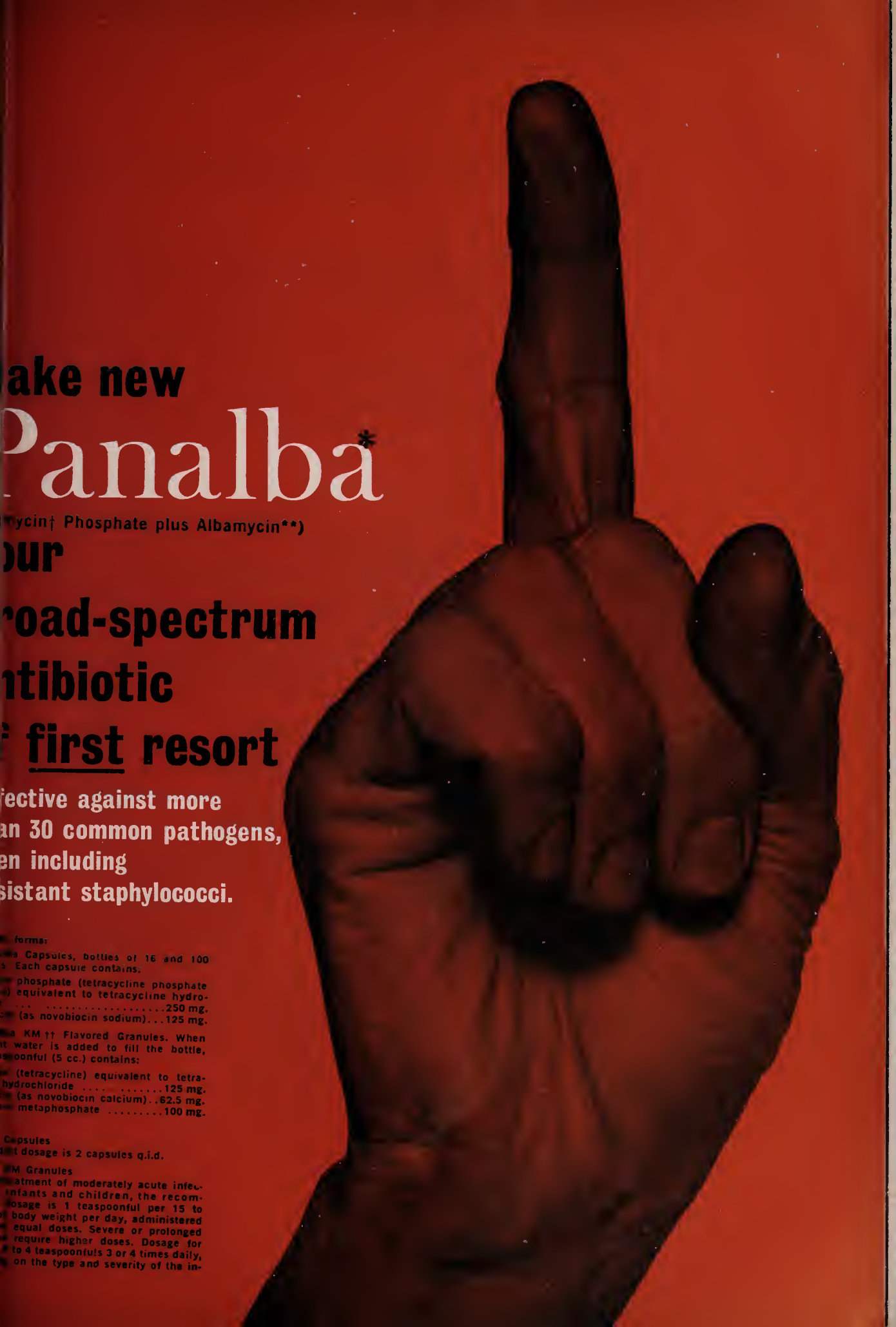
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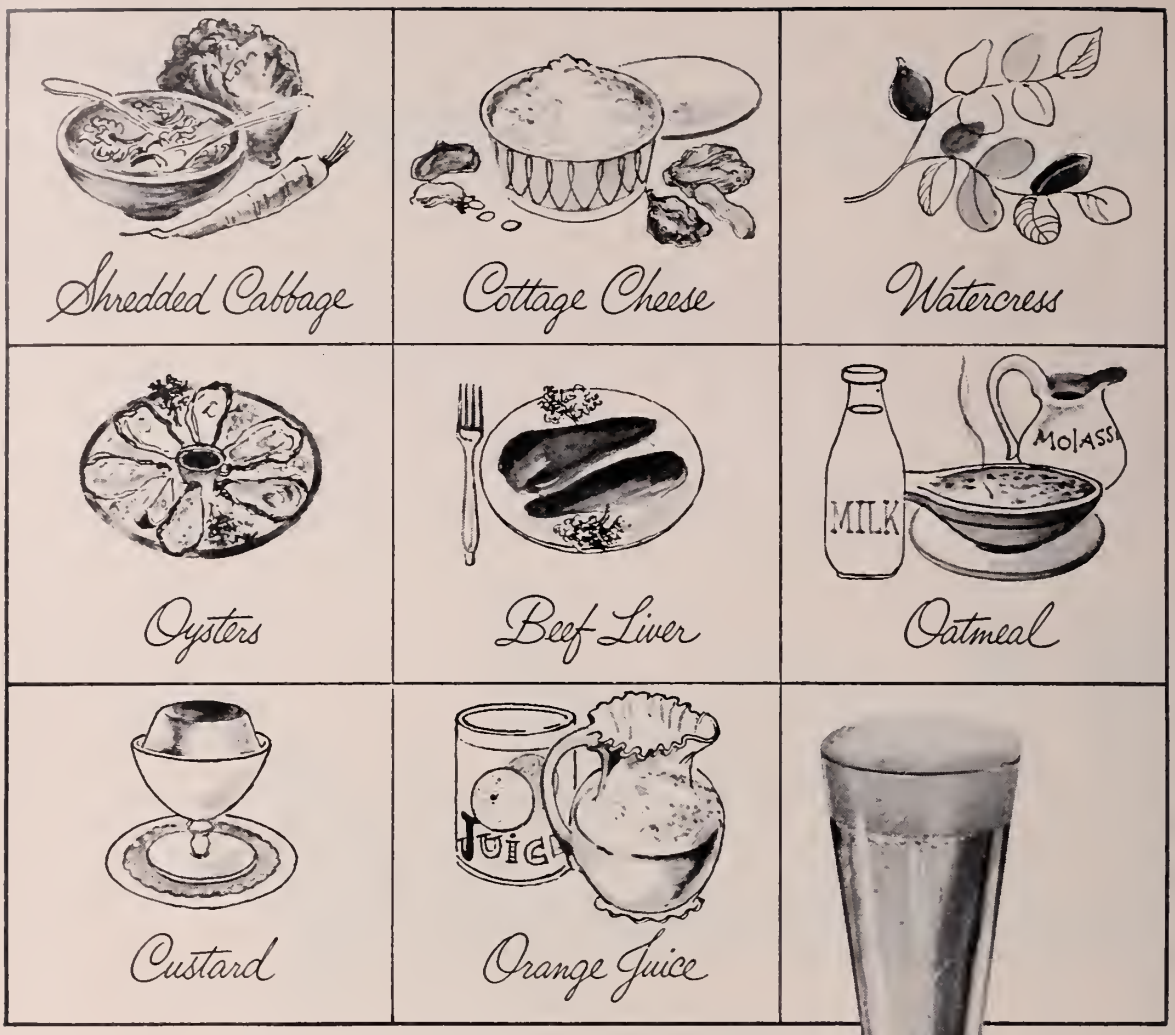
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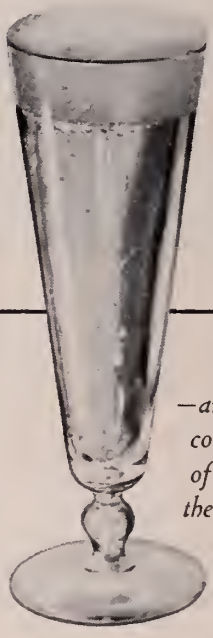


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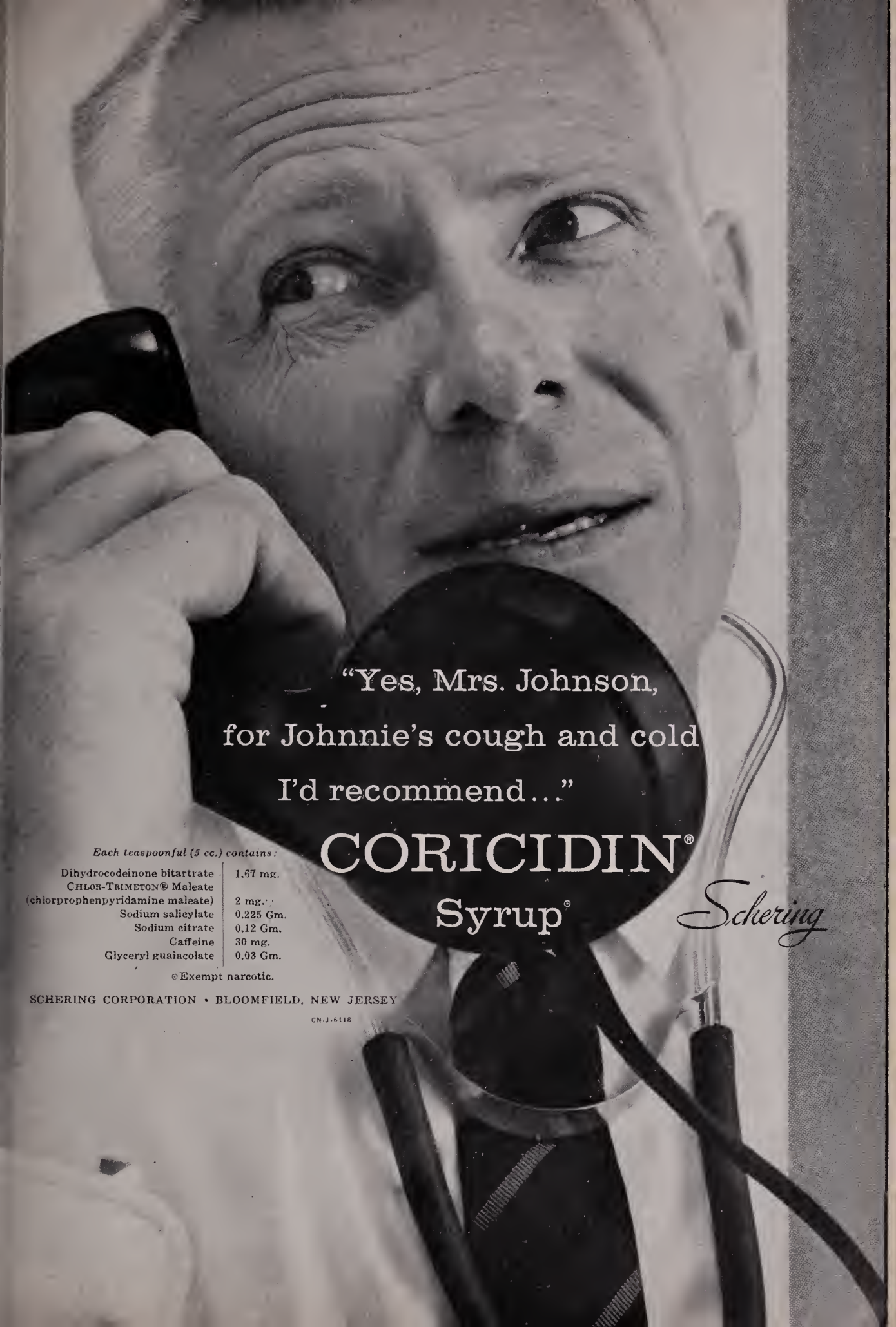
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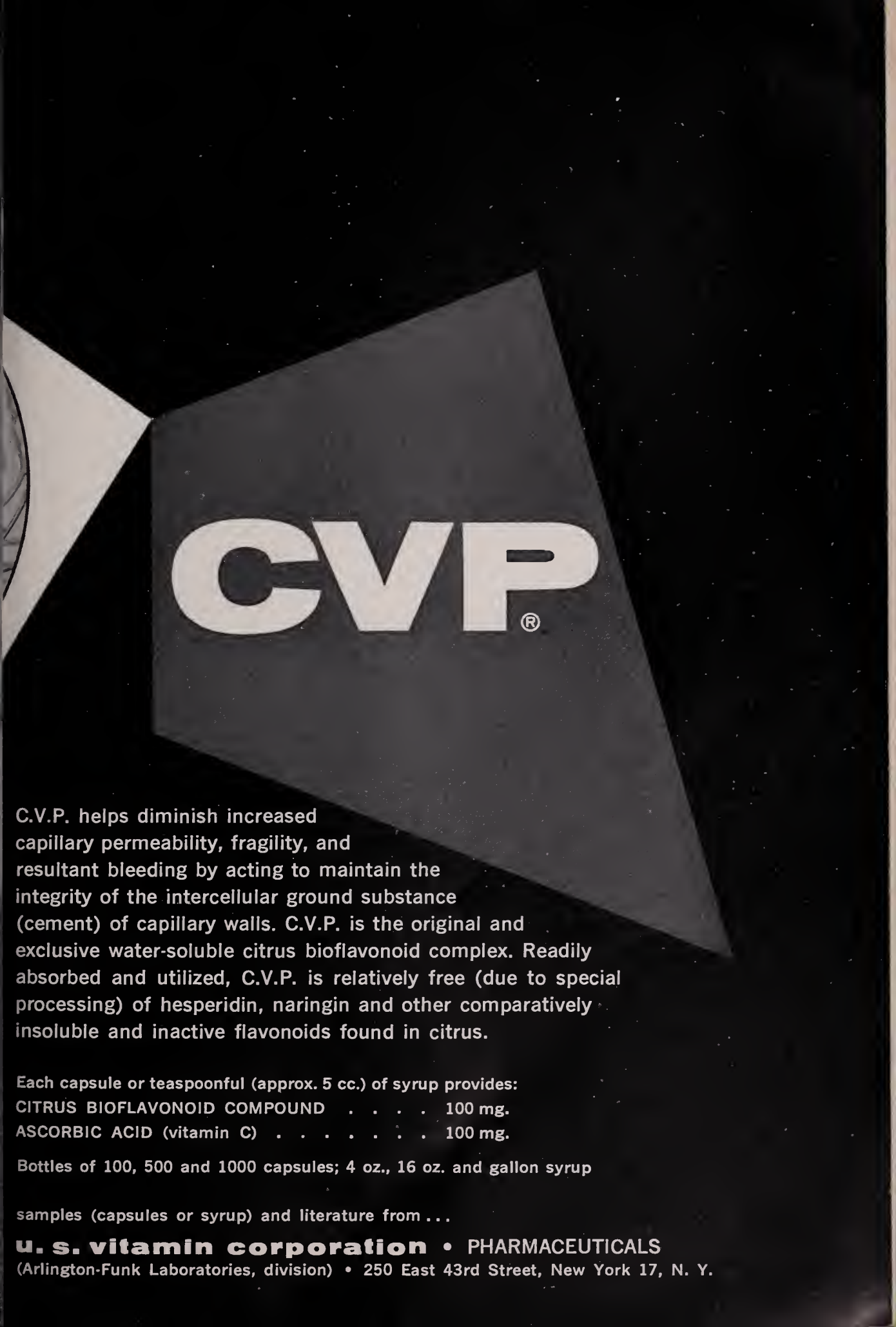
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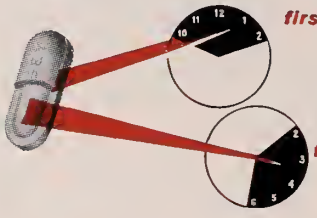
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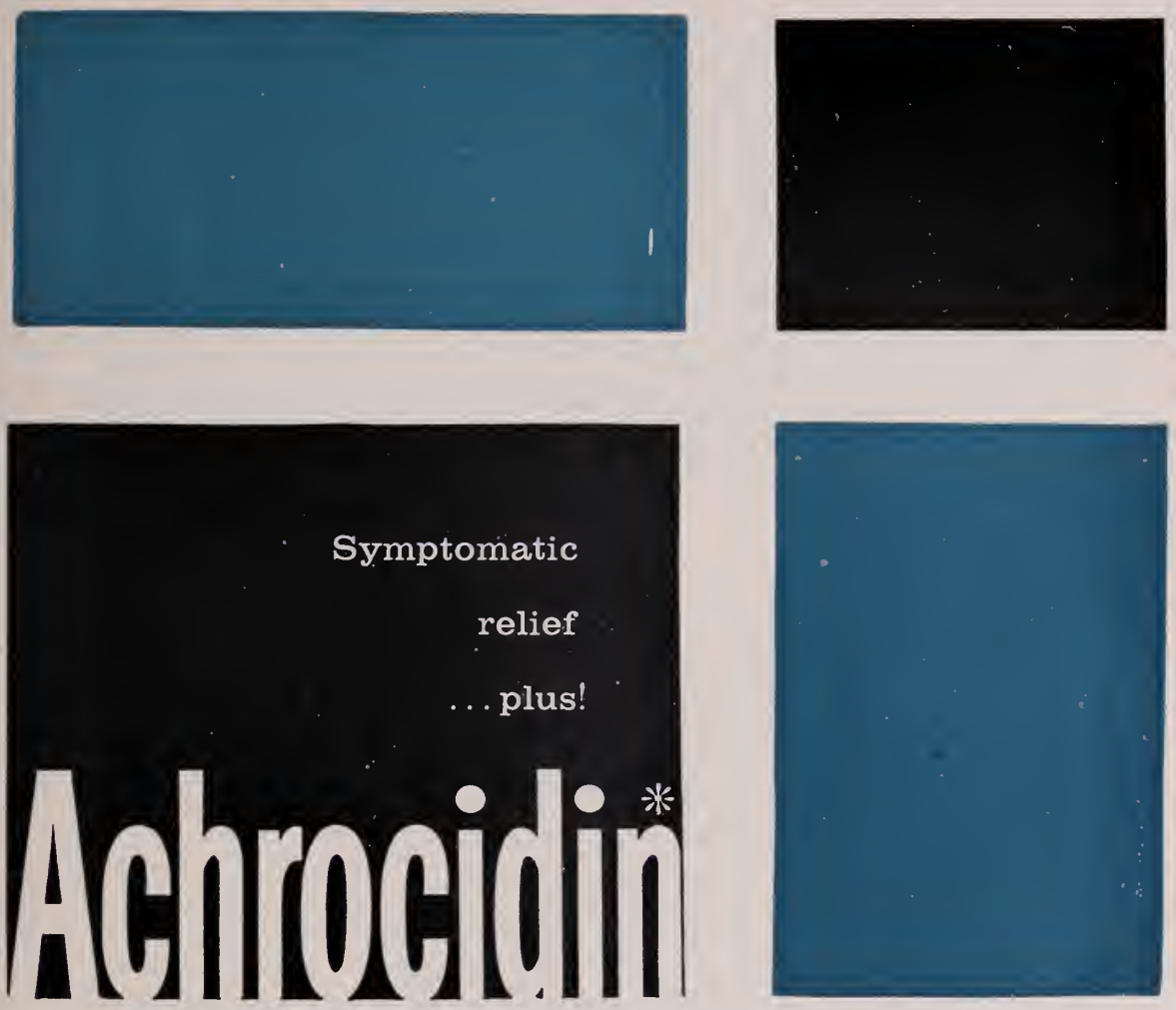
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*Finnerty, F. A. Jr.: New York State J. Med., 57:2957 (Sept. 15) 1957.

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The Virginia
MEDICAL
MONTHLY

November, 1958
Vol. 85, No. 11
Whole No. 1278

Guest Editorial . . . .

A Place for the Husband in Modern Obstetrics

THREE DECADES AGO most babies in this country were born at home. Today most women have their babies in a hospital. This change has been accompanied by a dramatic reduction in maternal mortality and morbidity. However, this shifting of childbirth from home to hospital has pushed the husband into the background. In the home delivery the husband could and often did stay with his wife during the early part of labor. It was he who summoned the doctor. He made himself useful after the doctor's arrival. In some cases he was even pressed into service as the doctor's assistant! In any event he had the thrill of seeing the infant soon after it was born. To the husband was entrusted the important task of disposing of the placenta.

Today's husband takes his wife to the hospital. Here she is whisked away from his ken. He then spends hours of chain-smoking or restless pacing up and down. Usually he is totally ignored. Sometimes through oversight or carelessness he may not even learn of the birth of the baby until many hours after it has occurred. Even after he has seen his wife he may be so overawed that he departs without asking to see the baby. I know of one case where a man was told that he could not see the baby until after it was bathed. Unable to wait he went to his job in the shipyard and did not see his first-born until the evening of that day, some fourteen hours later. In this way the role of the patient's husband in modern obstetrics has been reduced to one of insignificance, which might be humorously compared to that of a male fish.

This is not good. In our concern with the physical welfare of mother and baby we are allowing the dignity of fatherhood to be undermined. A spirit of resentment is being built up. Something should be done about this. I am not going to advocate a return to home deliveries any more than I would call for the abolition of the automobile because people today are admittedly not getting enough exercise. My suggestion is that every doctor practicing obstetrics should show consideration to the patient's husband at every possible opportunity. Try to make him feel that he counts for something besides paying the bill. If he accompanies his wife on her first visit to your office, take the few extra minutes required to make his acquaintance instead of ignoring his existence.

When he brings his wife to the hospital talk to him in person or over the telephone.

Reassure him (put yourself in his position). Find out where he is going to be so you can let him know as soon as the baby is born. Invite him to telephone you for a progress report when the labor is long drawn out instead of allowing him to pester the switchboard operator at the hospital. As soon as the mother is safely in her room, give the glad news to the husband in person or over the telephone. Make sure that he gets to see his wife as soon as possible and, above all, make sure that he sees the baby immediately after he has seen his wife. It is not necessary for him to wait until the baby has been *bathed*. (All that the nurse needs to do is to wipe off the baby's head, hands and feet, wrap it in a blanket and show it through the plate glass window.) Much will be gained by talking to the husband as the man, the friend, the father, the valued collaborator, which he surely is.

CHESTER D. BRADLEY, M.D.

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Spontaneous Compression of the Median Nerve in the Carpal Tunnel Producing Sensory and Motor Changes

Relieved by Section of the Transverse Carpal Ligament

J. M. MEREDITH, M.D.
Richmond, Virginia

THE MEDIAN NERVE as it leaves the forearm passes beneath the carpal tunnel in order to reach the hand. Within the tunnel (formed by the transverse carpal ligament anteriorly and the carpal bones posteriorly) it is subject to compression by neighboring structures because of space limitations imposed by the transverse carpal ligament. The resulting symptoms may be quite disabling with respect to sensory and motor loss in the thenar portion of the hand. Usually the syndrome is in middle-aged or elderly women although it does occur also in men. The diagnosis depends on sensory findings such as pain and paresthesias in the portion of the hand innervated by the median nerve, and the symptoms may be aggravated when the wrist is held in a flexed or extended position. When one percusses over the carpal tunnel and the median nerve, tingling in certain fingers may also develop. Occasionally, one sees *distinct atrophy of the thenar muscles of the hand.* Sometimes it is associated with rheumatic and joint disease of the carpals of the wrist, sometimes posttraumatically and occasionally the syndrome occurs entirely idiopathically. Immobilization of the wrist by a splint and administration of hydrocortisone in the tunnel relieves some of the milder cases. Simple sectioning of the transverse carpal ligament usually relieves the condition by decompressing the median nerve at that level.

Any alteration in the contour of the carpal tunnel or any increase in the volume of the contents of the carpal tunnel can readily compress the median nerve against the transverse carpal ligament producing symptoms mentioned above such as pain, paresthesias or numbness in the sensory distribution of the median nerve in the hand. The median nerve supplies sensation to the lateral half of the palm, the lateral half of the ring finger, the volar aspect of the entire middle finger, the index finger and the thumb. The median nerve, from the motor standpoint, innervates the opponens, the short flexor and short abductor muscles of the thumb. The term, "Carpal tunnel syndrome", is now used to describe all cases of compression neuropathy of the median nerve in the carpal tunnel. It is only in the past few years that this syndrome has been clearly brought to the attention of the profession,[1-11] except for one observation in 1913 and another in 1865. In fact, it was the observation of the writer, in discussing it with internes and house officers in general, that there was practically a complete absence of any knowledge of the syndrome among the younger physicians; hence its usual *late diagnosis* only after atrophy appears.

Brain, Wright and Wilkinson in 1947 described six cases in whom the condition had been successfully treated by section of the transverse carpal ligament. This was recommended as long ago as 1913 by Marie and Foix, and also by Cannon and Love in 1946. The last named authors reported 38 cases, calling them "tardy median palsy" and in some of their patients there was no associated injury or disease and therefore they could be classified, as in our two patients, as spontaneous median neuropathy. In 1957, Phalen and Kendrick, of the Cleveland Clinic, reported 71 of these patients that had spontaneous compression neuropathy of the median nerve in the carpal tunnel. Seventy-six per cent of the patients were women. The syndrome may be bilateral, as was true in one of our patients. This condition was also brought to our attention by one of our former Medical College of Virginia Neuro-Surgical residents, Dr. J. L. Thomson, of Norfolk, who has operated on a number of these patients in his clinic

Read at the regular monthly meeting of the Richmond Academy of Medicine, February 25, 1958.

From the Department of Neurological Surgery, Medical College of Virginia, Richmond.

in the last few years, most of them being middle-aged or elderly women.

The history is usually that of a progressive weakness and clumsiness in the hand or hands associated with numbness, tingling, and pain in the median nerve distribution distal to the wrist joint. Occasionally, there may be some aching or pain radiating up the forearm and even up to the shoulder, but there never are any objective sensory changes proximal to the wrist joint. Strenuous use of the hand also seems to aggravate the pain and numbness in the median nerve distribution. Many patients, particularly true in one of ours also (Case 1), have severe pain at night which prevents sleep. Hypoesthesia in the median nerve distribution was the most constant of all clinical findings in one series of cases, occurring in 96 per cent of the patients reported from the Cleveland Clinic. It has been shown experimentally that pressure within the carpal tunnel is increased by extension of the wrist. Sustained extension of the wrist, therefore, may also produce an exacerbation of numbness and tingling in the median nerve distribution. However, we have found that the wrist extension test is only occasionally positive in these cases and is not a reliable diagnostic sign. The so-called wrist flexion test, however, is very helpful in diagnosis. The patient is asked to flex both wrists completely and keep them flexed for approximately 60 seconds. In this position, the median nerve is pressed upon by the proximal edge of the transverse carpal ligament to a greater extent than it is when the wrist is extended. Even in the normal wrist, prolonged complete flexion of the wrist will eventually cause numbness in the median nerve distribution in the hand. In cases of compression neuropathy of the median nerve, however, there usually is a prompt exacerbation of numbness and paresthesias in the median nerve distribution in the hand when the wrist is held in a flexed position, with prompt improvement in these symptoms when the wrist is returned to a neutral position.

Bell and Goldner in 1956 reported 34 incidences of compression neuropathy of the median nerve from the Department of Orthopedic and Traumatic Surgery at Duke University. They stressed that the diagnosis of compression neuropathy of the median nerve is not infrequently missed and is usually made only after motor signs of muscular atrophy in the hand appear, unfortunately. For relief of pain and complete restoration of motor function, early diagnosis is essential, and this should be stressed. Marie and Foix in 1913 described a case of bilateral thenar atrophy which showed, at post-mortem examination, death having occurred from another cause, bilateral median nerve neuromata just proximal to the transverse carpal ligament. The authors then suggested that section of this ligament during life might have relieved the patient of symptoms arising from median nerve compression.

If the onset of symptoms has been gradual, and if no other definite cause has been established, the diagnosis may be confusing and difficult. The differential diagnosis includes neurilemmoma of the median nerve itself, cervical disk, syringomyelia, cord tumor, scalene anticus syndrome or cervical rib, peripheral neuritis, progressive spinal muscular atrophy and amyotrophic lateral sclerosis. Treatment, as already stressed, consists of dividing the transverse carpal ligament transversely with freeing of the compressed median nerve beneath. It is not usually necessary to excise any portion of the ligament or to do a neurolysis of the median nerve. Prompt relief of numbness, tingling and pain usually occurs following the operation. A transverse incision allows satisfactory exposure of the median nerve. Recovery of motor function and atrophy in the hand depends upon the duration and degree of compression of the median nerve before operation. If the opponens muscle weakness and atrophy has been present for years, the likelihood of satisfactory motor recovery is not good and an opponens substitution tendon transfer procedure may be done at the same operation in which the ligament is cut.

CASE HISTORIES

Case No. 1. Mrs. L. J., aged 52, was admitted to Medical College of Virginia Hospital on March 31, 1957, and discharged on April 10, 1957, for a bilateral section of the transverse carpal ligament for median nerve neuropathy. She stated that she had been having pain in each hand, particularly the thumb, index finger and thenar eminence for the previous eight years. She worked a great deal with her hands, being a member of the anatomy staff in one of our medical schools. She noticed that the dissection of anatomy specimens involving frequent extension and flexion of the wrists seemed to aggravate the discomfort and she was bothered a great deal by wrist and hand pains during the night. The symptoms were slowly progressive and paresthesias at times progressed to the point of complete numbness of the median distribution of the hands when at work in her dissection. The hands became tired very easily and unduly frequent rest periods were necessary. The thenar eminences were rather

flat bilaterally. Pressing on the course of the median nerve under the transverse carpal ligament produced severe pain in the distribution of the median nerve bilaterally.

On April 1 and 5, 1957, the transverse carpal ligaments were sectioned without incident. An enlargement of the median nerve just proximal to the point of compression was definitely noted when the ligament was being incised (Fig. 1). The entire

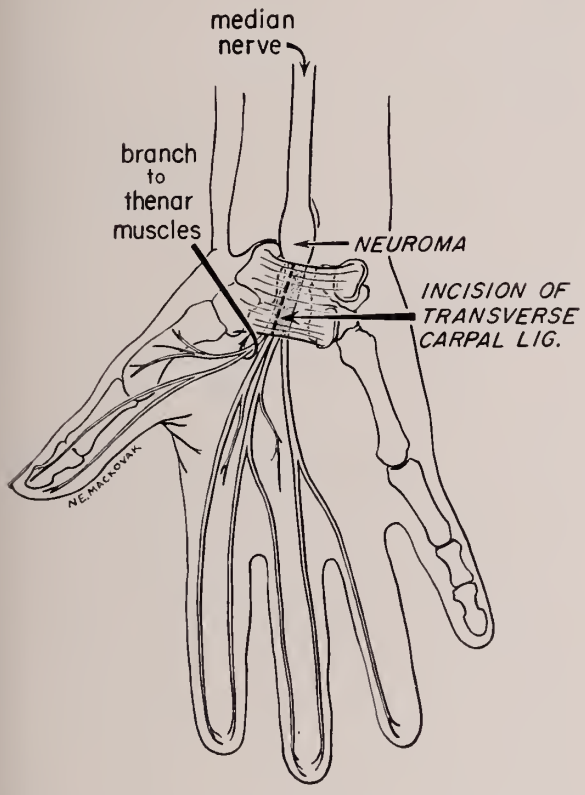


Fig. 1. Artist's drawing to demonstrate the bulbous neuroma-like enlargement of the median nerve proximal to the point of division of the transverse carpal ligament which latter structure must be completely divided transversely, with subsequent relief of pressure on the median nerve.

ligament was entirely incised transversely so that the median nerve was free in the wound. Closure was made without drainage in both instances.

Recovery was rapid and when seen in the immediate and late post-operative period, up to more than six months post-operatively, the pain had disappeared and she was using her hands regularly with little or no rest periods being required and with no night pains to disturb her sleeping. She was very satisfied with the result, and further atrophy of the thenar eminences seems to have been prevented by the procedure.

Case No. 2. Mrs. I. B., aged 52, was first seen in the office on October 15, 1957. She complained of severe pain in the palmar aspect of the right hand and wrist with definite numbness to pinprick of the right thumb and index finger compared to the left. She was extremely tender over the course of the right median nerve. X-ray films of the wrist and hand revealed no arthritis in the carpals of the wrist. There was no cervical rib present on x-ray examination of the shoulder. There was also slight swelling and edema of the wrist and hand on the right side compared to the left. There was sensory loss to pinprick over the thenar eminence and median nerve distribution generally of the right hand compared to the left.

The patient was admitted to the hospital and on October 23, 1957, the transverse carpal ligament of the right wrist was sectioned. There was severe compression of the median nerve beneath the ligament. There was definite fusiform swelling of the nerve at the proximal point of pressure of the transverse carpal ligament (Fig. 1) and after the ligament had been entirely incised, in a vertical manner, the nerve migrated anteriorly, being free of pressure.

The patient made a good recovery and was seen in the office on December 2, 1957, approximately six weeks post-operatively, and was in excellent condition. She could move the right hand very well at that time and there was no atrophy of the thenar muscles. The result was considered very satisfactory.

She was readmitted to the hospital, however, on January 11, 1958, for physical therapy including right-sided stellate blocks with novocaine on three occasions. This produced satisfactory relief and the patient now seems to be getting along very well so far as our latest examinations are concerned. X-ray films of the right wrist now show moderate osteoporosis with moderate changes of rheumatoid arthritis and definite degenerative changes in the distal interphalangeal joints. Probably this bony pathology contributed to the post-operative discomfort which this patient had at the time of her last admission to the hospital, relieved by the three novocaine blocks of the right stellate ganglion and whirlpool baths.

ANATOMY AND PATHOLOGY

The median nerve lies superficial in the flexor tendons of the fingers immediately beneath the transverse carpal ligament, also called by some anatomists the volar carpal ligament. It lies between the palmaris longus tendon medially and the flexor carpi radialis tendon laterally. Narrowing of the carpal tunnel secondary to fracture or hypertrophic arthritis may compress the median nerve between the carpal

bones and the transverse carpal ligament which is approximately one inch broad. We are concerned in this paper, however, with the *spontaneous* development of neuropathy due to compression of the median nerve beneath the transverse carpal ligament without antecedent or associated injury or disease. Marie and Foix in 1913, as previously mentioned, reported a definite "neuroma" of the median nerve found at autopsy in a case with severe bilateral atrophy of the thenar muscles; the "neuroma" was just proximal to the transverse carpal ligament. These authors suggested that there had been a so-called strangulation of the nerve beneath the ligament and felt that if the diagnosis could be made early enough in other similar cases, section of the ligament might prevent atrophy of the thenar muscles. Moersch suggested that the transverse carpal ligament be sectioned early to prevent irreversible changes in the median nerve. Phalen, Gardner and LaLonde of the Cleveland Clinic reported in 1950 three cases of surgical division of the transverse carpal ligament with excellent results. All three of their patients were middle-aged women. They discussed the pathogenesis of this condition (spontaneous median nerve compression); occupation may be a causal factor. When the wrist is strongly extended, there is a definite rise in pressure within the carpal tunnel. Almost all of the cases reported, including the two present cases from our clinic, were in middle-aged or elderly women. Ischemia of the nerve due to pressure may play an etiological role. Brain et al of England stress that the carpal tunnel lies between the tough transverse carpal ligament anteriorly and the bones of the wrist joint posteriorly. They believe repeated extension of the wrist to be an important etiological factor. It would seem that the rise of pressure in the carpal tunnel caused by repeated extension of the wrist is, in some patients, sufficient to cause compression of the median nerve and resultant symptomatology. It is also probable that vascular degeneration in middle age increases the ischemic effect of pressure on the median nerve which might be harmless in younger people. Spontaneous compression of the median nerve in the carpal tunnel may be caused by thickening of the flexor synovialis within the carpal tunnel. The exact etiology of this condition cannot easily be determined. It is thought that this tenosynovitis must be fundamentally rheumatic in origin although it is certainly not necessarily associated with true rheumatoid arthritis. The improvement noted in some cases after the injection of hydrocortisone into the carpal tunnel would also lend credence to the rheumatic nature of the tenosynovitis. Furthermore, many of the patients, including our case no. 2, complained of some periarticular swelling and transient stiffness in the small joints of the hand which may be due to periarthritis. It is interesting to speculate why spontaneous compression of the median nerve occurs so much more frequently in women than in men. There is no structural difference in the carpal tunnels in men and in women. Men certainly subject their hands to more trauma than do women. It is a well known clinical observation, however, that rheumatic conditions of various types about the wrist and hand are more common in women than in men. Since the majority of patients with compression neuropathy of the median nerve are women in or after the menopause, it may be that there is a stimulation of connective tissue growth when estrogens are no longer present to suppress the activity of pituitary growth hormone.

SYMPTOMS, DIAGNOSIS, AND DIFFERENTIAL DIAGNOSIS

The complete syndrome of median nerve compression at the wrist consists of paresthesia, pain, atrophy, sensory impairment to pinprick, and muscle weakness in the median nerve innervation of the hand. Hypoesthesia in the median nerve distribution was the most constant of all clinical findings occurring in 96 per cent, approximately, of reported cases. Tinel's sign is a tingling sensation radiating out into the hand obtained by light percussion over the median nerve at the wrist. Tinel's sign was present in approximately 90 per cent of operated cases. Atrophy of the thenar muscles: opponens, short flexor and short abductor muscles, was observed in varying degree in 54 per cent of operated cases (Table I). Some of the patients were unaware of the atrophy until it was brought to their attention. On looking down on the palm of the hand, one may fail to observe the thenar atrophy which is readily apparent when the profiles of the two thumbs are compared.

TABLE I

1. *Symptoms and signs of median nerve compression in the carpal tunnel*
   a. Positive wrist flexion and extension with aggravation of symptoms by this maneuver. (30 to 60 seconds).
   b. Presence of Tinel's sign over the median nerve at the wrist.
   c. Limitation of all sensory findings to the distribution of the median nerve in the wrist and hand.
   d. Often evidence of partial thenar atrophy.

According to Rowntree, if the opponens muscle is spared, there may be pronounced atrophy of the thenar muscles without significant weakness in the thumb. It has been established that there may be marked anatomic variation in the innervation of the thenar muscles. The ulnar nerve may supply some or all of the thenar muscles that usually are supplied by the median nerve. According to Cannon and Love of the Mayo Clinic, one must also think of lesions of the cervical portion of the spinal cord such as tumors, protruded cervical disk, scalene anticus or cervical rib syndrome, neuritis of the brachial plexus, progressive spinal muscular atrophy and amyotrophic lateral sclerosis; to this list we would add syringomyelia and even Raynaud's disease (Table II). In some clinics, cases have been

TABLE II

2. *Differential diagnosis of Compression Neuropathy of the Median Nerve in the Carpal Tunnel*

   a. Syringomyelia.
   b. Degenerative disease of the spinal cord. (progressive spinal muscular atrophy, etc.).
   c. Cervical disc.
   d. Scalene syndrome or cervical rib.
   e. Tumor or aneurysm in the neck.
   f. Generalized polyneuritis or diabetic neuropathy.
   g. Hypertrophic arthritis of the cervical spine.
   h. Injuries involving the cervical nerve roots.
   i. Brachial plexus lesions, traumatic or neoplastic.
   j. Raynaud's Disease.

seen that have had the scalene muscle incised for what proved later to be tardy median palsy from nerve compression at the wrist. X-ray films of the wrist, the thoracic inlet and cervical spine should be made in every case of suspected median nerve compression at the wrist to help rule out these possibilities. Fibrillary twitchings were never present in 38 cases of carpal median nerve compression reported from the Mayo Clinic. The onset is characterized almost always by paresthesias in the hand, rarely actual severe pain in the beginning. Occasionally old bony deformity, fracture or tumor of the wrist or carpals is present, and compresses the median nerve.

Failure to make the diagnosis of tardy median palsy early and to institute prompt operative treatment prevents one from obtaining the best results. Often these patients go for years undiagnosed and not rarely are thought to have psychogenic symptoms only until distinct atrophy of the hand develops. We believe that relief of pain can be promised to the patients who have pain, but the degree of return of motor function in the appropriate muscles and reversal of atrophy cannot be predicted in all cases. It is possible, by surgical means, however, as emphasized by Cannon and Love, to prevent further impairment of motor nerve function and muscle atrophy by decompression of the median nerve in an early tardy median nerve palsy.

In 1865 Sir James Paget described a case of latent impairment of median nerve function subsequent to an old fracture of the wrist, in his lectures on surgical pathology. This condition would be classified today as tardy median nerve palsy. The onset of symptoms is usually insidious and progression of impairment of function of the median nerve is gradual.

In 1941, Woltman of the Mayo Clinic reported a case of median nerve neuritis associated with acromegaly and suggested that the symptoms and signs were due to compression of the median nerve in the carpal tunnel brought about by acromegalic proliferation of the tissues. He also suggested that section of the anterior carpal ligament in the wrist might afford relief.

Phalen et al stress that great care should be taken in making the diagnosis of spontaneous compression of the median nerve in the carpal tunnel. They emphasize that the presence of a *positive Tinel's sign over the median nerve* at the wrist as well as the *strict limitation of all sensory and motor findings to the median nerve distribution* distal to the wrist are the two most reliable and important diagnostic findings. To these important diagnostic signs, we would add the definite aggravation of pain, tingling and/or sensory findings in the hand by hyperextension or by flexion of the involved wrist for one to two minutes.

Brain, Wright and Wilkinson (1947) in England stressed that the sharp limitation of the muscle wasting to the outer one-half of the thenar eminence and its severity there, in the absence of wasting elsewhere in the hand, and with no muscular fibrillations present, is characteristic of median nerve compression at the wrist and tends to exclude cervicodorsal cord disease as a possible locale of the pathology. They emphasized also that the thenar wasting due to cervical rib is unlikely to be associated with sensory loss confined to the cutaneous distribution of the median nerve. They reported six cases of median nerve compression, all bilateral, in the carpal tunnel, all in middle-aged or elderly women, without x-ray evidence of bony trauma or other pathology in the neighborhood of the wrist joint.

The symptoms and signs common to all Brain's

(et al) six cases were pain, paresthesia, and cutaneous sensory loss within the distribution of the digital branches of the median nerve, and partial thenar atrophy limited to the abductor brevis and the opponens pollicis muscles, or even the abductor brevis alone.

SURGICAL TREATMENT

The procedure usually employed is a simple one of decompressing and freeing the median nerve, according to Cannon and Love of the Mayo Clinic. A longitudinal (vertical) incision through the skin over the volar surface of the wrist is made and the median nerve is identified just proximal to the transverse carpal ligament. At this point, there is usually definite fusiform swelling of the nerve proximally (Fig. 1). Then the transverse carpal ligament is divided transversely; we have found it necessary (contrary to some writers) to prolong the incision well down over the palmar aspect of the hand to incise the distal portion of the ligament i.e., an inch or slightly more *below* the last transverse skin crease of the volar surface of the wrist. The median nerve beneath the ligament then presents itself but is compressed and often discolored. Care must be taken in section of the ligament, as the motor branch to the thenar muscles which makes its exit from the median nerve itself at the distal border of the ligament, is susceptible to injury. At the Mayo Clinic, neurolysis of the constricted portion of the nerve is also carried out by several razor blade incisions though the epineurium parallel to the axis of the median nerve. We have not found this invariably necessary, nor have other clinics here and abroad. The patient is advised to use the hand cautiously for five to six weeks and then resume full activity.

The post-operative improvement in the neurologic status has varied inversely with the degree and duration of impairment of motor nerve function before operation. The more complete median nerve palsy there is before operation, the less motor recovery usually occurs. Trophic disturbance such as ulcers on the finger tips and sensory loss may completely disappear.

Brain et al in their six operated cases (1947) stated that all their patients were treated by surgical division of the transverse carpal ligament with immediate relief of pain and tingling, and gradual improvement of muscle strength and atrophy of the hand and diminution in sensory loss. The lesion found at operation in their six cases was compression of the median nerve in the carpal tunnel and edema and "neuroma in continuity" for about one inch proximal to the point of compression of the nerve; our experiences paralleled this observation, with similar post-operative findings. There is no evidence of any disability whatsoever from section of the transverse carpal ligament and therefore no patient should be denied the benefit of operation if there are positive indications for surgical treatment.

With reference to the hydrocortisone injected into the carpal tunnel, as advocated by Phalen and Kendrick, they have injected 20 cases, 16 of which had definite improvement. Usually three or four injections of 1 c.c. at weekly intervals are sufficient and several patients required only a single injection before relief. The injection is made by inserting a 25 gauge needle directly into the carpal tunnel passing just medial to the palmaris longus tendon and the median nerve. The 1 c.c. of hydrocortisone is disbursed among the flexor tendons and beneath the median nerve in the carpal tunnel. No discomfort was experienced by Phalen and Kendrick's patients during the injection.

SUMMARY

Early diagnosis of this condition before pronounced muscle atrophy of the hand develops, on the basis of a positive wrist flexion or extension test, the presence of Tinel's sign over the median nerve at the wrist, and the limitation of all sensory findings to the median nerve distribution distal to the wrist, is stressed. The majority of patients with this condition are middle-aged or elderly women. Many of them also show evidence of partial thenar atrophy and intrinsic muscle weakness. There are usually no fibrillary twitches. The patient's symptoms of pain and paresthesias in the median nerve distribution of the hand may be readily relieved by sectioning the transverse carpal ligament at the wrist to decompress the median nerve in the carpal tunnel. In some cases reported in the literature surgery has not been necessary as a simple wrist splint or the administration of hydrocortisone in the carpal tunnel may alleviate the symptoms satisfactorily, although we have not personally had experience with this latter method of therapy.

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Jobs May Benefit Heart Patients

Suitable work may be more beneficial than rest nd retirement for persons with severe heart disease. r. Alvin Slipyan studied 19 persons who would ormally be considered to be unemployable but who ere successfully working in industrial and clerical bs. The physical condition of some of them acially improved after they started working.

Most industries refuse to hire cardiac patients ecause of the fear of absenteeism and compensation aims. Among these 19 persons, the low absenteeism te was remarkable, and there were no compensation aims.

On the basis of this study, he suggested a possible ange in the rule that persons with severe heart isease require constant rest and retirement from ork.

Included in the study, reported in the September 3 Journal of the American Medical Asscciation, ere 10 persons who had had heart attacks (three ith two attacks), seven with rheumatic heart dise, and two with hypertensive heart disease. They ere employed by Abilities, Inc., an Albertson, L.I., .Y., company employing only disabled persons.

Among the patients with postmyocardial infarcon, the age spread was from 26 to 63, with eight er the age of 50. Their jobs included office and lant bench work. The jobs all required the effort walking, but none heavy labor. Some of these people had been unemployed for as long as four and a half years before taking jobs at Abilities, Inc.

Travel time—a factor that can influence the success or failure in a job—ranged from 15 to 45 minutes a day and the distance from 5 to 30 miles. Seven drove their own cars.

Of these patients, five showed no change in physical condition after employment, three showed definite improvement, and one had increased attacks of pain but showed no increase in disability. One man died of a cerebral embolism, apparently related to an experience in which he was trapped in his car for more than an hour in a snowstorm.

Among the rheumatic heart disease group, five showed no change in their condition after starting work and two improved. Their jobs included office work as a messenger; plant inspector; bench work, and packaging.

One of the hypertensive heart disease employees showed no change in status and one gradually improved.

Dr. Slipyan noted that his report "may be considered unique in that never in the history of private industry has such a deliberate policy of employing the 'unemployable' cardiac patients been seen." The financial success of this enterprise is shown by the productivity of these employees.

Idiopathic Hypertrophy of the Heart in Young Adults

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THE DIAGNOSIS OF IDIOPATHIC HYPERTROPHY of the heart is essentially an exclusion diagnosis with the proof of diagnosis resting with the findings at the autopsy table. As gathered from the few cases reported, the age group ranges from about 21 to 44 years of age, with the majority of the cases falling in the twenties and thirties. The usual course is that of a patient who lives an essentially healthy life, free from such ailments as valvular heart disease, congenital defects, hypertension and arteriosclerosis, coronary disease, specific or nonspecific cardiac inflammations, anemias, avitaminosis, or prolonged tachycardia; thus attaining the age of young adulthood, suddenly, a year or two prior to death, to develop signs and symptoms of cardiovascular failure. Some of these young adults may even be enlisted into the armed forces, as was the situation in the four cases reported by Norris and Pote.[1] These cases are differentiated from the group known to the pediatricians as congenital cardiomegaly of undetermined etiology, for the latter expire before reaching childhood.

There are no specific symptoms or signs. They are the usual findings of cardiovascular failure in a patient with an enlarged heart. There may be murmurs, or not. None of the cases of Levy and Von-Glahn[2] had murmurs, while a few of the reported cases had murmurs that led the clinician to a specific, although erroneous, clinical diagnosis. The cardiovascular deterioration is rapid, with recurrent and progressive heart failure which leads to death, but a few cases have died suddenly without pulmonary edema and peripheral signs of failure. Some may develop arrythmias, but this is not a specific finding.

At post-mortem examination, the findings are characteristically negative except for an enlarged hypertrophied heart with none of the valvular defects that cause cardiac enlargement; and the amount of fibrosis, if any, is limited to small focal areas. The coronaries show only slight if any sclerosis, at least, not enough to account for muscle hypertrophy.

And microscopically the findings are limited to the findings of cardiac hypertrophy and only moderate fibroplastic infiltration, if any.

With this strict diagnostic criteria, which was used by Norris and Pote in 1946,[1] the number of reported cases are limited. With this criteria is eliminated a very large group of reported cases known as idiopathic, non-specific myocarditis. This latter syndrome takes in all age groups and characteristically shows an enlarged heart with marked amount of myocardial fibrosis. Ware and Chapman[3] say of this latter group, a "case of chronic myocarditis with cardiac hypertrophy and fibrosis of apparently unknown etiology could be ascribed to many acute or chronic infections that the individual may have in early life." This does not seem to be an etiological factor in our subject because of the lack of myocarditis.

The literature gives Laubry and Walsher credit for the first description of idiopathic hypertrophy of the heart in young adults, in 1925. Whittle[4] added another such case to the literature in 1929. Three more cases were recorded in 1933 by Levy and Rousselot;[5] and Levy again, but this time with Von-Glahn,[6] reported eight cases in 1937. Then in 1946 Norris and Pote[1] described four such cases, and in the same year Flynn and Mann[7] wrote of two cases, but only one case fits the criteria. In 1949 Evans[8] brought forth a question of etiology, by describing a familiar type of cardiomegaly in young adults; the cases not being unlike those described by the authors above. Some four other cases have been recorded in foreign literature[9,10,11,12] but the most recent report I have been able to find was by Davies, Marvel and Genovese[13] in 1951. They described nine cases ranging in age from 24 to 44 years. Three of their cases had a family history of cardiac death at an early age.

Thus the total number of cases reported is small. There is no doubt that others have been overlooked in the literature, and undoubtedly by all of us in

those young adults dying of cardiac failure, but never coming to autopsy.

CASE REPORT

This 31-year-old truck driver was essentially well until the fall of 1952. He had had most of the childhood diseases and pneumonia as a child, but he never had rheumatic fever, typhoid, diphtheria or other serious ailments. He was rejected from the armed forces because of his height, he stated. No other cause was given nor was he advised to seek medical attention. First, in September 1952, he began to note easy fatigability, weakness, and a tight constriction across the chest when he exerted himself. This latter was associated with dyspnea and palpitation. He was treated by his LMD who told him he had strained his heart, and put him to rest. The LMD never noted hypertension. Although he rested until the first part of 1953, his symptoms increased in severity and he began to note occasional pain in the left arm associated with the chest constrictive sensation. In January 1953, he went back to work but noted that he could not carry on the heavy work that truck drivers are called upon to do. Even if he just drove his truck, at the end of the run, he would feel "all in". He had slight cough but no orthopnea. No edema, etc.

A systemic review showed that he drank a half cup of coffee per day, but did not indulge in alcohol or tea. Before illness onset, he smoked one and a half to two packs of cigarettes per day, but cut this to one pack per day. Noted increased restlessness at night and the need for more rest and sleep. He averaged 188 pounds and measured 6 feet 9 inches. There were no complaints of headache, tinnitus, or dizziness; no eyesight change; no u.r.i. The gastrointestinal complaints showed loss of appetite, but no indigestion; he noted a full sensation and dyspnea if belt was taut. Genito-urinary—negative; neuropsych—nervousness, especially in latter months. Easily worried, upset and depressed. No numbness of extremities. Endoc.—sexually normal, has wife and two children; liked warm room; no tremors; no neck enlargement or choking sensation.

The family history indicated that his mother was age 51, living and well; one brother, living and well; father died at age 51 from heart ailment and had a murmur; one sister died during childhood from unknown cause. There was no history of tuberculosis, diabetes, cancer, etc., in the family.

Physical Examination showed an extremely tall, well developed and well proportioned white male sitting on the edge of the bed, moderately dyspneic with slight, if any, cyanosis. On admission, pulse was 76, irregular; temperature 98.8; respiration 20; height 6 feet 9 inches; blood pressure 120/40.

The head and neck were essentially normal. Eyes and eyegrounds normal, and there was no head bobbing; no palpable thyroid.

The chest was deformed, the right chest jutting out further than the left, anteriorly.

Lungs: the breath sounds were adequate and clear throughout. There were no rales.

Heart: the PMI was definite and forceful at the posterior axillary line in the sixth interspace. The LCB was found in the mid-axillary line. A forceful precordial thrust, which had an irregular character, was present.

There was, in the second interspace to the right of the sternum, a distant aortic second sound. A faint systolic murmur was heard in this area which was not referred into the neck. As one proceeded down the right of the sternum into the fourth interspace, the murmur became a rough grade four systolic murmur, best heard when the patient was in a sitting position. When one proceeded into the pulmonary area, this murmur faded and was faint. It died out as one approached the axillary area and was replaced by a grade II to III blowing systolic murmur. No mitral first sound was made out.

The heart was fibrillating at the rate of 96 per minute.

The remainder of the examination was essentially negative. The abdomen was free of masses or enlarged viscera. The genitalia were well proportioned and normally developed, as were the extremities. The integument and neurological examination were also normal.

Course in Hospital: The patient actually became fairly comfortable and seemed to respond to bed rest. He ate fairly well with only complaints of dyspnea and heavy feeling in his chest. On 7/16/53 the patient was found fibrillating at a rate of 140 with a pulse deficit of 20. He was more dyspneic and uncomfortable. That evening he suddenly experienced a sharp pain in the right chest that radiated to the right shoulder, and he presented a shock-like picture of cold sweats and slight stupor. The next morning he was in semi-shock with cold sweats, still complaining of pain in his right chest. His pulse was weak, irregular and rapid. The lungs remained clear to auscultation. At 5:00 p.m. that evening, he suddenly expired.

Laboratory:

Complete Blood Count:	7/14/53	7/15/53
Red Blood Count	4.97	4.7
Hemoglobin	94% (17 gm.)	98% (14.7 gm.)
Color Index	0.96	1.04
Sedimentation Rate	4 mm	--
White Blood Count:	6 700	7,600
Polymorphonuclear	64%	77%
Lymphocytes	36%	23%
Segs.	0	72
Stabs.	0	3
Eosinophile	0	2
Urine:		
Color	straw	amber
Reaction	acid	acid
Specific Gravity	1.024	1.024
Albumin	negative	1 plus
Sugar	negative	negative
Microscopic Examination	occasional epithelial cells	occasional white blood cells occasional epithelial cells

X-ray Chest: Diffusely Enlarged Heart with moderate congestive failure.

Electrocardiograph shows auricular fibrillation at a rate of 80, a normal QRS of 0.08. There is a tendency to a right axis deviation and, although there are no signs of acute or chronic myocardial ischemia, there are some suggestive findings of subendocardial ischemia of hypertrophy. However, not the marked changes usually seen in a heart that is hypertrophic secondary to hypertension, valvular defects, and other more common etiological factors.

The postmortem examination was done at 9:30 a.m. on 7/18/53. The external examination showed the usual postmortem cyanosis and skin changes. Upon removal of the sternum with costal segments, it was apparent that a large amount of chest space was occupied by a tremendously enlarged heart which not only filled the anterior mediastinum but also the lower left thoracic space to the rib cage. The pericardium was intact and there was no increased amount of pericardial fluid. The membrane showed no adhesions or signs of inflammatory change.

The Heart (Fig. 1), as pointed out, was tremendously enlarged, weighed 1070 grams, and the left border and apex were observed in the left chest cavity pressed against the rib cage. The anterior surface was smooth and rounded and showed no signs of infarction, recent or old. The right auricle was entered and the tricuspid valve ring appeared larger than normal and the valve leaflets seemed retracted as if stretched. No fibrosis or tears were



Fig. I

noted. The ring circumference measured 16 cm. The right ventricle was entered and the endocardium appeared normal with no thrombi made out. The wall was dilated and measured 0.5 cm. The chordae tendinae appeared stretched, but not fibrotic or retracted. The pulmonary artery was normal and the pulmonary valve leaflets were closed and showed no signs of fibrosis or pathology. The circumference was 10 cm. and a leaflet cusp measured 3 cm. The left auricle was then entered and the appendage was examined and found free of ante-mortem clots or mural thrombi. The mitral valve appeared like the tricuspid in being wide and opened, but no sign of leaflet pathology was made out. The circumference of the valve was 18 cm. The chordae tendinae appeared under stretch but normal. The left ventricular wall was markedly hypertrophied, measuring 2.2 cm. in thickness. The endocardium was normal. The aortic valve measured 21.5 cm. in circumference. The aorta immediately above the valve was 25 cm. in circumference. The commissures of the aortic valve extended up along the course of the aorta with distention of 3 to 5 cm. forming ridges which projected up to 1 cm. The lower thoracic aorta was elastic and essentially normal. The cusps of the aortic valve were much larger than usual and the amount of insufficiency must have been slight. The coronaries showed slight to no sclerosis.

The Lungs were not remarkable. The pleural

spaces were clear of fluid and adhesions. The lungs were removed in block dissection with the heart and the vessels carefully examined for ante-mortem thrombi and emboli. None were found. The bronchi contained some secretions but nothing of import. No areas of consolidation or infarction were made out. On the apex of the left upper lobe, there was a congenital cystic bleb measuring about 3 cm. in diameter, which appeared to be intact and did not communicate grossly with a large bronchus.

The Abdomen was examined and nothing remarkable made out. The liver had a brownish pale appearance but was normal size, and the cut surface appeared normal. The kidneys and adrenals were normal size and shape and the capsule peeled easily. The gross cut surface appeared normal. The adrenals were of normal size, shape and position. The pancreas was not remarakble, and the gastrointestinal tract appeared grossly normal.

Microscopic examination, on the whole, was remarkable because of the lack of findings. The heart showed a rather thin endocardium. The myocardium showed some edema and the muscle fibers were long and relatively thin. There was no fragmentation, and the hypertrophy seemed to be more in the increase in length and number of fibers than in cross sectional signs of hypertrophy. A few regions showed some interstitial fibrosis, but nothing remarkable. The mitral valve showed a slight hyalinized fibrosis. The aortic valve showed very slight thickening with no signs of activity. The coronary vessels were thin walled. The Aorta showed a slightly thickened intima, with the media showing a few small areas of degeneration. There was nothing marked or specific. The vasavasorum were thin walled and not remarkable. The Lungs were essentially negative except for some vascular congestion. The Kidneys showed a thick capsule and glomeruli of the usual number and distribution. The tufts showed some slight congestion and the tubules were well preserved. The vascular system was noted to be thin walled. The Adrenals were well preserved and normal. The Anatomical impression was Idiopathic (Congenital?) Hypertrophy of the Heart with associated enlargement of the Aortic Valve, Mitral Valve and Tricuspid Valve, all with insufficiency due to dilatation. Pulmonary congestion.

DISCUSSION

The clinical impression of this case was differential. Because of the age, lack of history and physical findings of hypertension and the onset of fibrillation, Rhemuatic Heart Disease with Mitral valvular disease was entertained as a possible diagnosis. However the type of cardiac enlargement with the lack of marked congestive failure and the character and location of the murmurs heard seemed to warrant consideration of a diagnosis of congenital heart disease. The less specific clinical impressions were that the patient did have left ventricular enlargement, mitral insufficiency, tricuspid insufficiency, possible septal defect and auricular fibrillation. As a cause of death, pulmonary infarction and/or CNS emboli were questioned. As you recall, the lungs at autopsy did not show any infarct and the CNS was not examined, so the exact modus of death is not known.

This case presented falls essentially within the criteria used by Norris and Pote;[1] specifically, a young adult dying a cardiac death a brief time after the onset of symptoms, manifesting a markedly enlarged heart free of pathological findings of myocarditis. Why he developed such a large heart is a mystery. Evans[8] hints at a familial etiology. This patient's father died of heart disease, but he was age 51 when he expired; and a sister died during childhood of unknown cause. Dr. Taussig[14] in her book on congenital heart disease, had this to say: "There is no clear cut evidence that idiopathic hypertrophy of the heart is a result of a congenital malformation. . . ." However, in this case, pathological examination showed enlargement of the valves and increased numbers of myocardial fibers rather than hypertrophy, which he must have had from birth.

As one can see, while perusing the literature on this subject, there is much confusion, and usually there is no attempt to differentiate between Idiopathic Myocarditis and Simple Idiopathic Hypertrophy. Actually, it is felt that this case probably should be classified as a congenital heart lesion.

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Nothing Wrong with Being Old

Playing "grandpa" roles for 30 years has taught a famed Hollywood actor that there's really nothing wrong with being old. In an article appearing in the October issue of Today's Health, a publication of the American Medical Association, actor Walter Brennan said old people spend too much time being sorry for themselves. "If they'd spend the same amount of time thinking up things they'd like to do or developing an interest in some sort of constructive activity, they'd have much less time for self pity."

The 64-year-old Brennan is well acquainted with the subject of growing old. In addition to his movie roles, he is currently the star of the TV program "The Real McCoys" in which he portrays Grampa McCoy. In real life the veteran actor has three children and 11 grandchildren.

From his own experience Brennan said there are certain things he is not going to do as a senior citizen. "First of all," he said, "I'm not going to preach. That seems to me one of the surest signs of senility.

"Then I'm not going to bear any resentment toward anyone, any time; nor am I ever going to compromise any of the principles that have always been important to me.

"And, finally, I'm never going to stop thanking God every morning and evening . . . for all the blessings He's sent my way."

To this personal philosophy, the actor believes Grampa McCoy would add these tips:

—Stop feeling sorry for yourselves; seek out constructive activity.

—Keep your minds and muscles satisfyingly occupied.

—Retain and sharpen your sense of humor.

—Quit complaining and start being thankful.

—Give abundantly of yourselves in any way that you are able.

Brennan also said that he is against compulsory retirement for anyone. "People keep saying to me," he said, " 'Sure, that's fine for creative people like you. But how about machine tool operators or desk clerks or department store buyers?' "

He answers, "Everyone is creative and every job is creative work—if you make it that way. If you don't, retirement isn't going to make any difference. The people who are bored and unhappy before retirement are going to continue the same afterward."

According to Brennan there are two things that can be done by oldsters. We can let them do for themselves as long as they are able and as much as they possibly can.

Secondly, we can make sure that the present younger generation is enlightened on what to do when they grow older.

Premenstrual Tension—A Water Toxicity Syndrome

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THE BLEEDING PHASE of the menstrual cycle rarely appears unannounced. Lassitude and irritability, abdominal and breast fullness, low abdominal and back pain are harbingers of its approach. Little heed is given these symptoms by many women, but there is a group in whom the symptom complex assumes such proportions as to compromise their well being. This is Premenstrual Tension.

Vagaries of women during the premenstrual week have long been the subject of comment. Hippocrates ascribed the state to "agitated blood seeking its escape at the uterus". Sorenus of Ephesus wrote in the second century, "when menstruation approaches it is accompanied by amlaise which we indicated. Rest is in most cases salutary. For just as people full from a drunken bout if they move vigorously may lay themselves open to sickness, and as those who have a congested head develop pain when they shout very loudly, in the same manner the uterus filled with the menstrual material through activity suffers compression accompanied by a feeling of weariness". And so for some women this is a time of distress, a time of personality change.

Characteristic of the syndrome is the abrupt and sudden release of tension at the onset of menstruation. This is accompanied by a diuresis. Indeed, the diuresis and the sudden relief of symptoms distinguishes the syndrome of Premenstrual Tension from psychoneurotic manifestations which too often mimic it. The rising tempo of distress accompanied by unusual weight gain, with sudden relief of symptoms and return to normal weight in association with diuresis on the first day of menstruation, defines the symptom complex: Premenstrual Tension.

ETIOLOGY

There can be little doubt that the symptoms are related to abnormal water storage. In 1933 Thomas reported two cases of unusual edema occurring cyclically during the premenstrual epoch. Associated with the edema were severe headache, abdominal fullness, leg pains, and psychic changes. Thomas saw these symptoms disappear coincidentally with the diuresis during the first 24 hours of menstruation. Greenhill and Freed later called attention to the frequency of this syndrome and suggested a treatment based on diuresis induced by ammonium chloride.

The disturbed water metabolism presumably is related to abnormal ovarian steroid metabolism, since the water holding properties of estrogen, and to a lesser extent progesterone, are well known. It has been suggested that adrenal cortical hyperfunction occurs during the premenstrual week and if this be true the water storing properties of adrenal cortical steroids may be incriminated. However, it should be recalled that water storage during the premenstrual week is normal; only when abnormal tissue hydration occurs does the symptom complex of Premenstrual Tension appear.

The syndrome has been reproduced in part by the daily administration of pitressin, the water fixing hormone of the posterior pituitary. Water storage up to 4 lb. has been artificially induced and many of the symptoms of Premenstrual Tension reproduced. However, there is no confirmed laboratory evidence that either the ovarian steroids, the adrenal cortical steroids, or pitressin are altered in the premenstrual tension patient over and above that which is to be found in the asymptomatic patient. The etiology is unknown.

TREATMENT

Rational treatment was first recommended by Greenhill and Freed in 1941. Until the advent of more efficient diuretics their regime of salt restricted diet and administration of ammonium chloride in the premenstrual week was acceptable therapy. However, many patients found it difficult to tolerate the large doses of ammonium chloride and even when they did the diuresis which it induced was often insufficient to relieve the symptoms. A thorough-going study of premenstrual tension and its treatment with a new soluble form of bromtheophyline in combination with pyrilamine was reported in 1951. This provided a treatment regime far superior to the ammonium chloride—salt restric-

tion previously employed. The soluble form of bromtheophyline proved to be an effective agent for blocking abnormal water storage and for increasing sodium excretion during the premenstrual week. Excellent clinical response was obtained in practically all patients. This continues to be a most satisfactory and convenient means of relieving these patients. Ever aware of new compounds which might normalize water metabolism in the premenstrual week, a clinical study on Chlorthiozide is here reported.

CLINICAL GROUP—UNTREATED

With this background a study was inaugurated to evaluate the clinical efficacy of a new compound, Diuril®. The patients were seen as private outpatients. The clinical data was recorded either by the author or the nursing staff. The evaluation of symptomatic relief in each case was made by the author. All patients with known disorders of water metabolism were excluded: hypothyroidism, adrenal cortical dysfunction, cardiac disease, nephritis, hypertension, and those with edema of undetermined etiology.

Age Incidence

The average age of these 72 patients was 28.6 years. The youngest was 14 and the oldest 43 years of age. Premenstrual tension symptoms in the younger group tended to have a shorter duration and to be of lesser intensity than those in the older group. There were 18 patients under the age of 25 years and 54 who had passed their 25th birthday.

Duration of symptoms

The average number of premenstrual days on which these patients complained of symptoms was related to two factors: 1. age; 2. menstrual history. In the younger group (under 25 years) the duration of symptoms was three days; whereas in the older group (over 25 years) the duration of symptoms averaged 6.5 days.

There was a definite relation to the periodicity of the menstrual cycle. Patients on a regular cycle (26-30 days) experienced a shorter duration of symptoms than those with long interval cycles (30-45 days). In the former group the average number of days in which the patient complained of premenstrual tension was 2.5 days; whereas in the long interval group duration of symptoms often exceeded 12 days and the average was 10.25 days. The polymenorrheic group (cycle 18-24 days) complained least. There were 48 patients in the regularly menstruating group; 17 in the oligomenorrheic group; 7 in the polymenorrheic group. The symptoms were always short lived and of little intensity in the polymenorrheic patients.

Weight Changes

With few exceptions the intensity and duration of symptoms paralleled the weight gain. Of the 72 patients there were 47 on whom the weight was recorded daily at home during one entire cycle or during the premenstrual time and continuing through the first one to two days of the menstrual flow. The average weight gain for these 47 patients without treatment was 4.74 lb.

The most severe symptoms were experienced by one patient who gained over 11 lb. during her premenstrual week. It is of interest to note that this patient had previously suffered edema and toxemia in two pregnancies before she was seen for premenstrual tension.

The average weight gain for the group under 25 years of age was 3.75 lb. and for the older group 5.75 lb. When the weight changes are chartered against the type of menstrual cycle, it is again seen that the greatest weight gain was in the oligomenorrheic group, 6.25 lb.; least in the polymenorrheic group, 3.0 lb.; and moderate in the regularly menstruating group, 4.25 lb.

Water Intake and Output

Attempt was made in some patients to record the fluid intake and output during the premenstrual week and the first two days of flow. As might be anticipated the figures are open to considerable question since all of these were outpatients. In any event, there were eight patients who cooperated to the degree where the figures may possible be of some value. In this group the average urinary excretion during the first 24 hours of menstruation exceeded the intake by 280 c.c.

CLINICAL GROUP—DIURIL® TREATED

All patients in the group just described were advised to take one tablet of Diuril® daily after breakfast beginning at the onset of premenstrual symptoms and continuing until the first sign of menstrual flow. All were instructed to record their weight on bathroom scales daily upon arising in the morning and continuing through the first two days of menstruation. They were requested to report on the first day of menstruation. There were 49 who reported for follow-up interview. Of these 42 had well-kept charts. The conclusions as to the efficacy of Diuril® treatment are based on these 49 patients.

Side Effects

Thirst and mouth dryness were the complaints preeminent and were voiced by 17 of these patients voluntarily. This symptom was quite annoying. Dizziness was reported by two, and in one of the patients it recurred with each dose on each of three successive days until she refused further medication. Urinary frequency, especially during the three-to-six hour period after medication, was referred to as a great annoyance and inconvenience by 22 of the patients. This was especially noteworthy in three school teachers. One patient complained of diplopia but on continuing medication this symptom disappeared and no further complaint was heard.

Clinical Response

Relief of premenstrual tension symptoms had a tendency to be an all or none reaction. Especially was this true of breast fullness and abdominal bloatiness. Interpretation of symptoms such as the anxiety states, nervousness, irritability, was more difficult because here the psychosomatic overlay introduced vagaries into the clinical picture. In this group of 49 patients abdominal bloatiness, breast fullness, and congestion were the most prominent symptoms in 22 patients. Twenty patients reported complete relief of these symptoms during the course of Diuril® administration. These 20 patients were for the most part in the older age group (25 years of age or older) and 17 of them fell into the oligomenorrheic group (35-45 day cycle). The weight gain in the untreated cycle of these 22 patients was 5.25 lb., whereas the average weight gain in the treated cycle was 1.75 lb. The two patients who reported no clinical relief had an average weight gain of 5 lb. in the untreated cycle, and 4.5 lb. in the treated cycle.

Evaluating the overall clinical relief of the entire premenstrual tension complex, 38 patients had an excellent response to treatment in the opinion of the author. The average premenstrual weight gain for this group was 4.5 lb. in the untreated cycle, and 1 lb. in the treated cycle.

In 11 patients the clinical response was considered unsatisfactory. Included in this group was the one patient who discontinued medication because of dizziness. Careful inquiry into dose schedule, cooperation, and treatment of the other patients indicated that they had taken the medication according to directions. Headache and nervous tension were the predominant symptoms in this group of failures. It was interesting to observe that this failure group showed an average weight gain of 3.25 lb. in the untreated cycle. In other words, their premenstrual water storage was somewhat less than in the group as a whole, and considerably less than in those patients who complained chiefly of abdominal bloatiness and breast fullness. On casual examination of the figures one might think that these patients had been erroneously classified as premenstrual tension patients and that their major problem was a personality or psychosomatic one. On studying their weight gain during the treated cycle, however, it was found that this group averaged 2.75 lb. and therefore it would be more accurate to say that these patients failed to respond to therapy because for some reason they were refractory to the diuretic effect of Diuril®.

CONCLUSION

It is apparent from this study that Diuril® is an efficient blocking agent against abnormal water storage during the premenstrual week in about 70 per cent of patients suffering the Premenstrual Tension syndrome. Abnormal water storage, however, is not the only factor in Premenstrual Tension syndrome. Autonomic nervous system imbalance, altered steroid metabolism, and vascular congestion play contributing roles.

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Vegetable Foreign Body of the Bronchus—Spontaneous Pneumothorax

An Unusual Complication

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SPONTANEOUS PNEUMOTHORAX as a complication of a foreign body of the bronchus occurs with such rarity that it is thought that this case report would be worthy of presentation to this group. In the recollection of the members of our Department of Otolaryngology, it is not believed to have occurred in the University of Virginia Hospital prior to this time. I do not intend to imply that sharp-pointed metallic foreign bodies of the air and food passages have not produced spontaneous pneumothorax, subcutaneous emphysema, or mediastinal emphysema, nor that these conditions have never occurred as a result of a tear or perforation of the bronchial wall caused by instrumentation in removing foreign bodies. It is also well known that these conditions are encountered as a technical complication of tracheotomy; however, as a complication of a vegetable foreign body, its occurrence is even more rare.

Fortunately, foreign body aspiration into the bronchi happens with much less frequency than several decades ago. We feel that the credit for this must be attributed to the members of our specialty and to the medical profession as a whole, as the result of the work that has been done in educating the public regarding the dangers subsequent to the aspiration of foreign material. In the University of Virginia Hospital, for the two years, 1955 and 1956, there were 29,410 admissions with only 10 cases in which foreign body of the bronchus was proved by its bronchoscopic removal. This represents an incidence of 0.03 per cent. Nevertheless, it does occur with sufficient frequency that its possibility should not be overlooked.

A review of the literature reveals that there have been eight previously reported instances of spontaneous pneumothorax as a complication of a vegetable foreign body in the bronchus. Two of these were in the German literature and one in the French literature, and we were unable to obtain copies of the articles. The remaining five were reported in the domestic journals during the past twenty-five years.

Jackson and Jackson[1] describe one case in a 14-year-old child who had aspirated a cocklebur seven months earlier. This child had a large pyothorax which was drained by external thoracotomy. Two months later, when the patient's condition had improved, the foreign body was removed bronchoscopically. There was an inflammatory stenosis of the bronchus which was completely occluded. The Jacksons reiterate that most instances of pneumothorax in foreign body aspiration cases are caused by the trauma of instruments and are usually associated with mediastinal emphysema and subcutaneous emphysema. They do state that pneumothorax has occurred in patients when there has been no instrumentation, and these have been in the nut kernel group.

Holinger, Andrews, and Anison[2], in a study of 35 tracheal foreign bodies and 318 bronchial foreign bodies, reported this complication in three cases, two of which resulted from prior instrumentation. The third one was a child with a tooth in the right upper lobe bronchus with a slight pneumothorax and minimal collapse of the lung. The air was gradually absorbed without further complication, following bronchoscopic removal of the foreign body.

Clerf[3] reported one instance of a slight pneumothorax in a series of 413 foreign bodies in the air passages. This one was caused by a bean in the bronchus, with resultant obstructive atelectasis of the entire right lung. The pneumothorax was associated with a marked emphysema of the neck and mediastinal tissues. After bronchoscopic removal, there was complete recovery, although a later tra-

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cheotomy was performed for relief of obstructive laryngeal dyspnea.

Rubin[4] relates one case in a 2-year-old child who had aspirated a peanut. Twelve hours following aspiration of the peanut, there was widespread emphysema of the subcutaneous tissues of the neck, chest, and abdomen. A short time later, an x-ray film revealed a spontaneous pneumothorax on the right side. After recovery of the foreign body, the emphysema and pneumothorax subsided spontaneously and completely.

Harkins[5] reported a single instance of an 18-months-old boy who choked and gagged while eating a candy bar covered with chopped pecans. A chest x-ray twelve hours later showed an atelectasis of the right middle lobe. Two hours after hospital admission, a repeat chest x-ray revealed a right-sided pneumothorax with partial collapse of the right lung. Twenty-four hours following bronchoscopic removal of the foreign body, an x-ray picture disclosed partial absorption of the air. A tracheotomy became necessary because of acute laryngeal edema, and eleven days later the patient was discharged with a fully expanded right lung. Harkins also cites the three instances in the foreign literature, although he thinks one of these may have been due to a tracheotomy.

REPORT OF A CASE

The patient was an 18-months-old white female. She was of normal spontaneous delivery with normal growth and development and had been in excellent health. While eating peanuts at home, she suddenly began to laugh. Her parents noted that immediately she began to cry and that her crying voice was abnormal momentarily, but it rapidly returned to normal. No cough nor cyanosis was present, and no evidence of respiratory distress was noted. She ate her usual evening meal and was put to bed at the customary time. Shortly thereafter, she awakened with considerable coughing, choking, and pulling noisy respirations. These symptoms continued throughout the night; the following morning medical advice was sought. She failed to respond to medications, and that afternoon the parents noted cyanosis. The child was then seen by one of us (R.H.C.), and on examination wheezing was noted, both audibly and on auscultation. A chest x-ray was taken, which showed a 50 per cent collapse of the right lung, due to a pneumothorax (Fig. 1); so the patient was referred to the University of Virginia Hospital.

On admission, the patient was a well-developed and well-nourished female child, obviously quite ill,



Fig. 1.

with a rectal temperature of 104°. No cyanosis, hoarseness, nor cough was present, but the respirations were rapid, noisy, and labored. Wheezing was heard. There was marked retraction of the costal margins and suprasternal notch with flaring of the nares on inspiration. Percussion revealed hyperresonance of the right chest, anteriorly and posteriorly, with normal resonance over the left chest. On auscultation there were decreased breath sounds over the entire right chest, with expiratory wheezes and no moist rales. A second chest x-ray, two hours after the first, showed further collapse of the right lung with the appearance of minimal hydrothorax. (Fig. 2). The heart and other mediastinal contents were displaced slightly to the left, and the right diaphragm was depressed. Fluoroscopy was not performed because of the urgency of the situation. The left lung field was normal, as well as the remainder of the examination.

The infant was seen in consultation by members of the Chest Surgery Department, regarding the pneumothorax. It was decided that re-expansion of the lung was of primary importance and then removal of the foreign body. Consequently, she was taken to the operating room, where under general



Fig. 2.

anesthesia a trocar was placed in the right anterior axillary line with closed drainage by a catheter under water. She was then positioned and draped for bronchoscopy. A 5 mm. by 30 cm. Jackson bronchoscope was introduced through an infant laryngoscope into the trachea, which was then well visualized. On entering the right main stem bronchus, an intact one-half peanut kernel was encountered obstructing the bronchus. This was grasped by a foreign body forceps and then delivered by locking it to the distal end of the bronchoscope. Respirations and color improved, so the child was placed in a croupette with moisture and taken to the recovery room.

The following day she was less febrile and her color was improved. Respirations were slower and a chest x-ray showed re-expansion of the lung with patchy exudate throughout the right lung field.

Eighteen hours later, the respirations again became labored and rapid with a trace of cyanosis. A portable chest film revealed atelectasis of the right lower lobe, and wheezing was heard over the right chest. It was thought that a foreign body was still present in the bronchus, so she was returned to the operating room. Under general anesthesia, a 5 mm. by 30 cm. Jackson bronchoscope was introduced, and in the right lower lobe bronchus an additional one-half peanut kernel was again encountered. This was removed with the foreign body forceps, and further examination disclosed a small peanut husk which was also removed. (Fig. 3a).

Because of the additional instrumentation so soon following the previous bronchoscopy, a prophylactic tracheotomy was performed before the bronchoscope was removed. A No. 2 tracheotomy cannula was inserted in the trachea and the child was placed in the croupette upon return to the recovery room. Two days later, the chest catheter was removed. The postoperative course was rather stormy, being complicated by diarrhea and vomiting. She received parenteral fluids, antibiotics, and gradually improved. An



Fig. 3.

ld tuberculin patch test was negative. On the tenth ay she was decannulated and, after all wounds had caled, was discharged from the hospital on the four- enth day. A chest x-ray, taken one month after ischarge, was interpreted as normal. (Fig. 3b). She s now well.

COMMENT

The physiopathology of the pneumothorax cannot e explained fully, but it is assumed that it was due o a rupture of a subpleural alveolus or cyst into he right pleural space. Rubin[4], in his textbook on iseases of the chest, uses the explanation of the Macklins in explaining this phenomenon. If the lveoli are overexpanded through overinflation of he lungs without a corresponding widening of the umen of the blood vessels which they border, a pres- ure gradient is created between the two and rupture akes place. Likewise, if there is a reduction of the umen of the vessels without a corresponding reduc- ion in the size of the alveoli, leakage of air is per- nitted. The partial occlusion of the major bronchi esults in the so-called "obstructive emphysema". Therefore, the alveoli rupture either as a result of inadequate basal support of the collapsed alveoli or from the compensatory overdistention of adjoining alveoli with resultant spontaneous pneumothorax.

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Hip Bursitis

Pain in the lower back and legs may actually be "bursitis of the hip" and not sciatica, according to a Texas orthopedist. The condition, medically called he trochanteric syndrome, may be treated in the ame way as bursitis of the shoulder, Dr. Morton H. Leonard, El Paso, said in the September 13 Journal of the American Medical Association.

Bursitis, a general term for several disorders, usually means the inflammation of the fluid-filled sacs that act as pads between tendons and bones.

In the trochanteric syndrome, the bursae and ten- lons near the trochanter major are affected. The rochanter major is a projection from the thigh bone ear where it joins the hip bone.

As in shoulder bursitis, the usual cause of the trochanteric syndrome is the wear and tear of every- day use. It is not so common or so well known as bursitis of the shoulder.

The onset is frequently sudden, with pain on the side of the hip extending down the back and side of the thigh. Pain may be referred to the lower back. Local tenderness in the region is constant. If there are calcium deposits in the area, a low-grade fever may occur.

Treatment may include x-ray therapy, diathermy, puncture of the affected bursa, and surgical removal of calcium. Dr. Leonard has also found that in- jections of the steroid hydrocortisone acetate into the affected part also helps.

Heavy Percussion and Induced Cough in the Diagnosis and Treatment of Pulmonary Diseases

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IN THE AUGUST 1953 issue of the Virginia Medical Monthly, I published a review of my experiences in a pediatric practice during the previous twenty-five years with the use of heavy bimanual percussion and induced cough in the diagnosis and treatment of pulmonary diseases.[1] In 1954, I reviewed this article for Clinical Medicine.[2] The present report will review again some of the alterations of physiology which result from partial and complete bronchial obstruction, and record additional observations made during the past five years, while using heavy percussion and cough.

Experimental studies have shown that if any bronchus is completely obstructed, the air in the alveoli supplied by that bronchus is absorbed—the oxygen, about 20%, going first, then the carbon dioxide, nitrogen, etc., at a slower rate. The absorption of these gases produces a partial vacuum in the affected area, and this dilates the local capillaries and pulls on the secretions in the bronchus and on the surrounding structures. The pain which results causes a voluntary suppression of coughing and interferes with sleep. The negative pressure, and the dilated capillaries both favor a more rapid absorption of toxins and bacteria if the block is caused by infection and exudate, and this increases the fever. This same suction also might play a determining role in the progression of the infection by drawing infectious material deeper into the part of the lung dependent on the blocked bronchus.

If the bronchus is not completely blocked, the lung tissue dependent on the partially blocked bronchus tends to distend, if the inspiratory efforts are more effective than the expiratory in getting air past a valve-like obstruction. The trapped air in the blown-up lung gives up most of its oxygen and increases its percentages of carbon dioxide and nitrogen. Normal exchanges of oxygen and CO_2 are not possible in the involved area and the patient has to struggle to stay alive if the involvement is extensive.

Percussion, auscultation, and observation, before and after the use of heavy percussion and cough, often reveal changes which are easy to detect and to interpret. Even if no changes occur that knowledge can be valuable in diagnosis. Finger-tip percussion done to reveal the junction of resonance and dullness should be practiced routinely so that deviations from the normal, if present, can be found and marked on the skin with the finger-nail or pencil. Equally careful auscultation to detect any deviation from normal in the the breath sounds is also important so that the changes which may follow the heavy percussion and cough can be recognized as changes and so become useful in diagnosis. For example, slightly wheezy rales may be heard on examination. If these rales nearly disappear after the heavy percussion and a productive cough, and the breath sounds become louder and clearer, the rales were probably caused by fairly loose mucus and minor swelling of the tubes such as might result from bacterial bronchitis. If the cough is dry and little or no secretion can be seen while inducing the cough with a tongue depressor, and the rales not only fail to clear but become louder and more wheezy, the picture is obviously different. The latter findings suggest swelling and possible spasm of the tubes, and point to asthma if generalized, or to virus pneumonia if localized, as the probable diagnoses.

Changes to diagnostic percussion after the heavy percussion would be slight or absent in simple bronchitis but would be marked in either asthma or early virus pneumonia. In either of these diseases the original percussion would reveal hyper-resonance and an extension of resonance beyond the normal limits. Immediately after the heavy percussion, which drives the air from the distended lung, diagnostic percussion would reveal dullness instead of hyper-resonance and a shift of the line of dullness up to three inches in some cases. It might also reveal dullness near the lung root that could not be found while the lung was distended. These changes show that air has been driven through a narrowed tube and that the distended lung tissue has been flattened. The time required for the lung to distend again is significant because it reveals the degree of the narrowing. Auscultation immediately after the heavy percussion will

reveal louder wheezes, and, in early virus penumonia, may reveal crepitation near the lung root which is easier to detect than before the trapped air was expelled. These findings obviously give additional information for localizing and visualizing the pathology present.

The procedure of heavy percussion (one hand is placed flat on the chest and is struck firmly and with some pressure by the other) and induced cough was devised about 1929 after I became interested in massive atelectasis, which had been subjected to considerable study shortly before the date. After I learned that bronchial blockage, usually by muco purulent secretions, was the cause, and became aware of the pathogenesis of atelectasis and the numerous disturbances it produced, I came to the belief that atelectasis, of greater or lesser degree, might be playing an unrecognized role in many lung infections. The next step obviously was to find atelectasis if it were present, and to eliminate it if possible as an aid to therapy. It seemed reasonable that heavy percussion might drive any remaining air through the bronchus with enough force to dislodge the obstructing secretions so that outside air might enter the collapsed part of the lung. After a few trials I became convinced that this could be done easily and with little or no discomfort to the patient, so I began to use my procedure routinely. It soon became obvious that no two cases were exactly alike and the differences in response to my procedure were helping me greatly to visualize the pathology present. For example, if prompt relief of pain occurred during the heavy percussion, and the patient could then cough up sputum, and if physical examination revealed resonance over the previously non-resonant area, and breath sounds and rales replaced diminished or distant bronchial breathing, atelectasis must have been the chief offender. Another indication of atelectasis was the rapid fall of temperature if fever had been present. In other cases, varying degrees of the changes mentioned above seemed to reveal the extent of atelectatic involvement, and also seemed to parallel the benefit experienced by the patient.

According to my original conception, some air was supposed to be in the collapsed lung to be pushed through the bronchus by the force of the heavy percussion in order to dislodge the obstructing secretions. That theory would suggest that heavy percussion would not benefit atelectasis of the newborn because, first, no air was present, and second, the bronchus was not filled with mucopurulent secretions. Further consideration, however, suggested that the heavy percussion not only would compress the chest wall and the lung, but also would produce a negative pressure from the rebound of the bent ribs immediately afterwards. Negative pressure at the periphery of the lung is nature's way of getting air into the lung. Efforts to force air into the lung by positive pressure are not physiologic and haven't been nearly so successful. With this thought in mind, I began to use heavy percussion, usually with two fingers instead of the whole hand, over the involved areas whenever I found diminished resonance and lack of normal breath sounds while examining the chest of a newborn infant. The usual result has been obvious improvement of resonance and breath sounds, especially if the infant had been disturbed enough to cry, and improvement of color if cyanosis had been present. No doubt the majority of the infants who responded to this procedure and did well would have cured their atelectasis later by their own efforts. Certainly, none was harmed.

The diagnosis of hyaline membrane disease probably can be made positively only by the pathologist. There has been a considerable difference in the opinions advanced as to the etiology of hyaline membrane disease, but general agreement that it is a highly fatal malady. Lendrum[3] published an excellent discussion of hyaline membrane disease in 1955. His studies pointed to left heart failure as the direct cause. This failure is due to several factors. 1. The changes incident to tying the cord: the right side of the heart which has been pumping blood through the foramen ovale and the ductus arteriosus and thus into the general circulation, begins to pump to the pulmonary circulation only. The foramen and the ductus close. 2. The left ventricle, which at that time is no more powerful than the right, has to carry the load alone. The comparative weakness of the left ventricle is probably more marked in the premature infant. 3. In many places the small infant is put into an oxygen enriched incubator on a slant with the head lowered, and is disturbed as little as possible. This combination favors engorgement of the pulmonary vessels, hypostasis of blood, and shallow respiration. As pulmonary pressure increases, transudation of plasma into the alveoli occurs, and this interferes with gas exchange. Under these circumstances the foramen and the ductus may reopen. The poorly oxygenated blood leads to progressive failure of the left ventricle, and this increases the back pressure on the pulmonary vascular bed. The final picture is marked engorgement of the pulmonary vessels, pulmonary edema, and final left heart failure. Lendrum

advocated elevation of the head of the bed as a preventive measure.

For a good many years I have ordered elevation of the head of the bed whenever I have noted respiratory difficulty or slowed heart rate with vomiting with the intent of lowering pressure in the brain and thereby helping the vital centers to work better. Unknowingly, I have followed Lendrum's advice and so may have prevented some cases of hyaline membrane disease. The affected babies seemed to do better and hyaline membrane disease certainly has occurred rarely in my practice. One newborn infant, seen while on service at a charity hospital, presented the picture of dyspnea, cyanosis, impaired lung resonance, and moist rales throughout both lungs. This baby was treated by elevation of the head of the bed and oxygen, plus heavy percussion over both lungs front and back several times daily. This was done by myself, the resident, or the nurse, whenever the baby seemed to be getting worse. Each time he was treated he showed some evidence of improvement. Breath sounds became clearer, rales became coarser, resonance improved, and dyspnea and cyanosis became less. He finally recovered, after several days of severe illness.

SUMMARY

Heavy percussion to be followed by a cough is a procedure which was devised about 1929 and used ever since, with increasing satisfaction.

Partial obstruction of a bronchus, caused largely by swelling and spasm, produces changes in the structure and function of the involved lung which are quite different from those produced by complete obstruction. Both produce alterations from the normal, which can be found on physical examination.

Abnormal findings, caused by both of these conditions, often can be changed by heavy percussion and induced cough. Detecting these changes by repeating the examination, adds a new dimension which helps the physician to visualize better the nature and location of the pathologic process, and so shortens the way to proper treatment.

Improvement in symptoms after the heavy percussion and cough, seems to parallel the degree and permanence of the changes effected.

The indications for heavy percussion of the chest and elevation of the head of the bed in the care of certain newborn infants have been discussed.

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Medicare in Virginia

During the twelve months period ended June 30, 1958, a total of 28,215 Medicare claims-payments were processed for Virginia doctors. In only two states, California and Texas, were a greater number of doctors' claims paid. In Virginia the payments amounted to a total of $2,069,007, or an average of $73.33 per claim. In California the average payment was $71.08; in Texas it was $83.57.

Throughout the United States and Territories the average amounts paid per claim ranged from a low of $58.04 (Wyoming) to a high of $104.03 (Alaska), with a median of $74.39. Virginia's average claim payment of $73.33 was, of course, pretty close to the median; actually per-claim payments were higher in 31 states (Alaska and Hawaii included) and were lower in 20 states (the District of Columbia and Puerto Rico included).

Almost 5% of the total of Medicare's "business" with doctors is being done in Virginia.

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Pectus Excavatum

Description, Discussion and Presentation of Cases

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PECTUS EXCAVATUM is a congenital deformity involving the sternum and adjoining cartilages. Usually, the deformity is most marked in the region of the lower gladiolus and xyphoid process with associated deformity of the third through the seventh costal cartilages. The resulting depression varies in degree, but if marked will result in both severe physiological and cosmetic aberrations. This paper is devoted to a discussion of this subject and to the presentation of an uncomplicated method of surgical repair in ten patients without the use of external traction.

ETIOLOGY

Since the pectus deformity consists of a depression of the lower gladiolus and associated cartilages, it is logical to attribute the defect to either (1) a constricting band attached to the posterior sternal region and restricting growth in that region, or (2) an absence of muscular and cartilaginous growth of the anterior chest wall due to an embryological deficet. Brown[1] favored the first theory and proposed the existence of a short central tendon which, by fixing the xyphisternal junction in a depressed position, would accentuate the deformity as growth continued. Brodkin[2] favored the second proposition and felt that because of an absence of muscular growth of the anterior diaphragm in its embyrological development from the septum transversum, a fibrous substitution occurred in that region with resultant pectus excavatum. Actually, in chondrosternal deformities, the anterior muscular portion of the diaphragm is absent, and a tendinous insertion replaces the normal muscle fibers. As the diaphragm contracts, there is, therefore, a parodoxical retraction which we recognize as the pectus excavatum deformity. We feel that both these ideas may be partially true since there exists both a constricting band and a muscular deficiency which mutually contribute to the defect.

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Lester[3] has thoroughly reviewed the main as well as the more esoteric theories of pathogenesis of this deformity.

MANIFESTATIONS

The manifestations of pectus excavatum deformities are essentially of two types: (1) cosmetic and (2) those related to mechanical deformity of the chest cage with faulty respiratory motion, cardiac displacement, compression of pulmonary tissue and great vessel detortion. The cosmetic deformity is obvious and logically lends itself to introversion and self-consciousness on the part of the involved child. Narrowing of the mediastinum with shifting of the heart to the left has the mechanical disadvantage of decreasing respiratory efficiency and in severe cases, causing cardiac failure.[4,7] A finding which may not have an early clinical significance is the electrical deviation of the electrocardiogram.[5] Numerous cases of cardiac manifestations due to the excavatum deformity have been presented and may take the form of paroxysmal tachycardia[4,5] due to pressure on the heart itself, great vessel distortion with resultant axis deviation[7] and possibly pulmonary hypertension. Most writers urge that repair of the pectus deformity should be carried out prior to development of symptoms and between the ages of three and eight years. During this age span, the surgical procedure is easily performed and is facilitated by the lack of heavy chest musculature, the absence of thick, cartilaginous and bony sternal plates and a rapid convalescence unfortunately absent in the older age groups. Our own observations on the incidence of symptoms have been in agreement with the views of Lindskog.[8] We believe that a minority of patients with pectus excavatum actually have symptoms which can be specifically related to the deformity. Children under the age of four or five years often give a history of frequent respiratory tract infections, and this finding is quite common to the excavatum deformity. It is, however, only conjecture to relate this pectus deformity to inadequate removal by cough of bronchial secretions,

and the relationship may be more apparent than real. However, it seems surgically sound to correct this deformity during a period in life when symptoms are minimal and the repair is associated with a low complication percentage. It is also our observation that those patients although usually smaller than the norms for their age do not have other congenital deformities. There have been several children in our series with congenital laryngeal stridor. These two conditions, respiratory infection and laryngeal stridor, when they exist in connection with pectus excavatum, certainly play a part in encouraging and exaggerating the deformity in the soft and unstable anterior chest wall. (Chart I)

CHART I
PECTUS EXCAVATUM

Case	Age	Cardiac Symptoms	Respiratory Infection	Complications	Result
1	15 mos.	0	yes	no	good
2	5 yrs.	0	0	no	good
3	16 yrs.	0	0	no	good
4	28 yrs.	0	yes	yes	fair
5	7 yrs.	0	0	no	good
6	4 mos.	0	yes	no	good
7	2 yrs.	0	yes	no	good
8	16 yrs.	0	yes	no	good
9	4 yrs.	0	yes	no	good
10	5 yrs.	0	yes	no	good

REPAIR

Most surgeons agree that the operation is a major procedure which involves the removal of the deformed and incurving cartilages and the division of the sternum by an osteotomy so that it can be elevated to the level of the remainder of the anterior chest. Some use traction to maintain the corrected position,[1,6,8,9,10] while others do not consider it necessary.[11] We believe that external traction is not necessary in those patients under 15 years of age, and, depending upon the type of chest wall, its thickness, degree of deformity, musculature, etc., it may not be necessary in the older age groups as well. We are presenting ten cases of pectus excavatum repaired without the aid of external traction, and do not believe that these results could be improved upon through the use of external traction. This method of repair avoids the obvious disadvantages of external traction, and the risk of an infected wound.

TECHNIQUE

The technique is essentially similar to that described by Ravitch[12], and consists of a mid-line incision from the level of the second or third cartilage to the tip of the xyphoid process exposing the rectus abdominis insertions. Musculocutaneous flaps are elevated bilaterally to expose the costosternal junctions, and the third through the seventh costal cartilages are carefully removed in a subperichondrial fashion. Care must be used to avoid pleural tears. The sternum is then elevated by blunt dissection from the underlying mediastinal tissue. This can be done quite easily, since there is predominantly areolar tissue beneath the sternum and only the xyphisternal region is fixed by a fascial band. The xyphoid process is frequently poorly developed in children and may be preserved or sacrificed at the discretion of

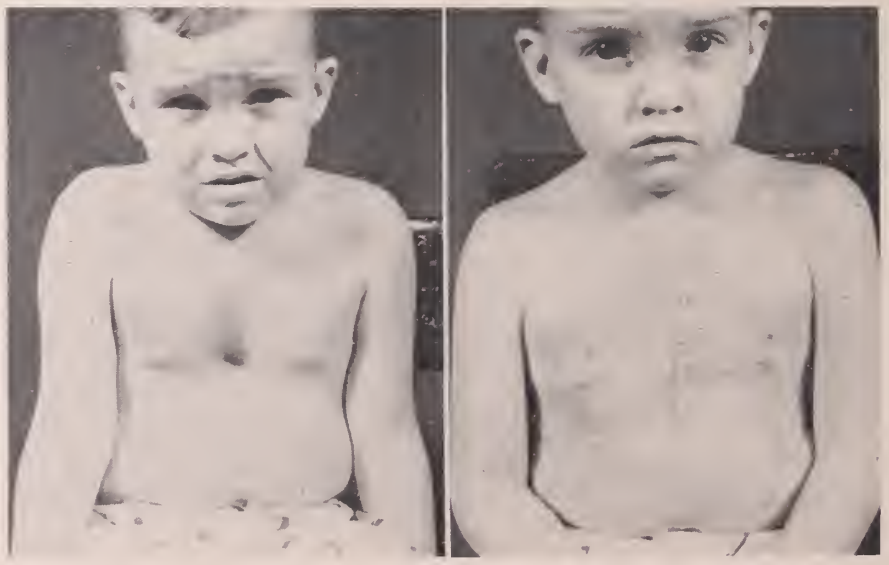


Fig. I

A. Pectus Excavatum Deformity

B. Pectus Excavatum Repair on Seventh Postoperative Day

the surgeon. A transverse sternal osteotomy is performed at the point where the sternum is angulated inward. In order to preserve and accentuate the resulting elevated position, periosteal sutures of fine wire are placed across the osteotomy. Each intercostal bundle is then divided and sutured to the external periosteum of the rib above. In this way, the sternal plate is maintained in its elevated position. At the completion of the procedure, a small Penrose drain or water-sealed tube is placed in the substernal region and the skin edges are closed in layers with fine silk sutures. Drainage will be only minimal if delicate dissection and strict hemostasis have been observed.

COMPLICATIONS

The removal of costal cartilages three to six, and the sternal osteotomy produces a moderate degree of paradoxical motion. This paradoxical motion may decrease the ability to cough, clear secretions and reduces respiratory efficiency. This is actually not a complication since it is a condition associated with all chest wall repairs. Furthermore, we have had no cases in which tracheotomy or devices for stabilization of the chest wall were considered necessary. During the freeing of retrosternal tissues or cartilages, a small tear is often produced in one or the other pleura. This is usually recognized and easily closed. However, a portable chest film in the



Fig. II

A. Pectus Excavatum Deformity

B. Pectus Excavatum Repair on Seventh Postoperative Day

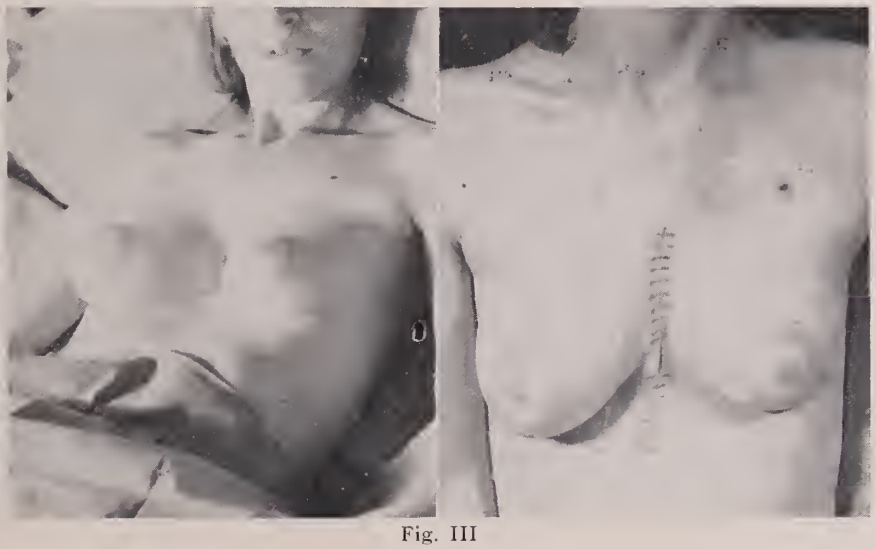


Fig. III

A. Pectus Excavatum Deformity

B. Pectus Excavatum Repair on Seventh Postoperative Day

immediate postoperative period obviates the problem of an unrecognized pneumothorax. If there is any question, the space may be evacuated with a single needle aspiration, but water-sealed drainage for 24 hours is safer and more efficient.

Infection of the substernal space is a rare occurrence if adequate drainage and antibiotic coverage is used. Meticulous hemostasis during the repair is mandatory to decrease wound edema, serum or blood formation, and to allow per primum healing to occur. (Fig. I, II, and III)

The patient has usually stabilized his chest wall so that no further paradox occurs by the fourth or fifth day. Since complete stabilization is not complete for from two to four months, a removable plaster jacket is worn during the day to protect the chest while playing.[12]

SUMMARY

A brief discussion of the two main etiological theories and manifestations of pectus excavatum is related. Ten cases of pectus excavatum repair without external traction are presented and this type of repair is advocated.

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Cause Many Strokes

A large percentage of strokes are caused by obstructions in the arteries of the neck. The obstructions, frequently resulting from hardening of the arteries, reduce the flow of blood to the brain, producing the symptoms of stroke—weakness, loss of speech and the ability to understand, visual disturbances, and mental dullness. Other possible causes of stroke are blood clots, capillary hemorrhage, or blood vessel spasm in the brain.

Careful diagnosis of the cause of the stroke must be made in order to decide the proper treatment. Occlusions in the neck arteries are readily diagnosed through the use of x-ray.

Since the obstructions lie in the neck, they can be treated by "direct surgical attack," according to Drs. E. Stanley Crawford, Michael E. De Bakey, and William S. Fields, Baylor University College of Medicine and the Methodist Hospital, Houston.

Writing in the October 4 Journal of the American Medical Association, they said the surgery may take the form of actual removal of the obstructed part of the artery or the creation of a grafted by-pass around the occlusion. They have surgically treated 43 patients who had occluded internal carotid, innominate, subclavian or left common carotid arteries. These arteries all lead through the neck to the head.

Since surgery signs suggestive of impending stroke have cleared in all patients, and episodes of recurrent strokes which had occurred in 14 patients before operation have not recurred in any patient.

A Clinical Approach To Rational Fluid Therapy

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THE FOUNDATION of fluid therapy was laid in the early seventeenth century when Harvey published his classical monograph. Soon after this, Sir Christopher Wren injected various substances into animals and recorded his results. The pioneer inorganic chemists of the early nineteenth century stimulated physicians in Great Britain to study patients with cholera during one of the epidemics there. Distinct changes were noticed in the blood and stools of the victims. By injecting appropriate repair solutions of sodium chloride and sodium bicarbonate, dramatic improvements in morbidity and mortality were obtained.

This work, although published,[1] was largely forgotten for almost a hundred years until the great modern biochemists[7] rediscovered and developed these principles. Pediatricians,[8,9,10] dealing with diabetic coma, applied them clinically. More recently, surgeons[2,3,5,11,12] have realized the tremendous applicability in such conditions as burns, crushing injuries, intestinal obstruction, and in many similar acutely ill patients.

Fluid therapy offers some of the most dramatic results in medicine on the one hand, and on the other, severe danger of overtreatment. One cynic has said that probably at one time, more acutely ill patients were done in by this therapy than were saved by it.

There are at least two good reasons why the practitioner should be a master of this subject. In the first place, a rational approach simplifies the problem rather than complicates it. A simple example may illustrate this: The average medical student expends a large amount of time in acquiring a good knowledge of gross anatomy, but unless he uses this knowledge in his work, some of it, at least, slips away so that the average competent practitioner would be hard put to diagram the Circle of Willis. Now, this same student spends as much, or more, time on the basic principles pertinent to fluid therapy, and if he correlates them and uses them in his clinical practice, they will stay with him just as anatomy does with the surgeon.

The second and compelling reason for urging the extra effort necessary to master this therapy is that, as Moore[2] has pointed out, the homeostasis of the body has been developed and perfected over millions of years and the clinician should be well advised before he tampers with it. It may be true that most patients recover when treated "by ear" as it were, still in the critical case, the compensating mechanisms of lung, kidney, blood buffers, and the usual clinical signs may be dangerously unreliable. Responses to rational therapy can be dramatic, life saving, and among the most satisfactory experiences in medical practice.

With regard to terminology, the former diagnosis of "dehydration" is incomplete in modern parlance. Just as the diagnosis of intestinal obstruction should be modified by adjectives such as high or low, simple or strangulating, mechanical or paralytic, similarly should the diagnosis of fluid imbalance be descriptive.

A four-point descriptive classification will be used. This system was first described by Carl Moyer[3] and covers all phases of the problem. Although they are listed separately, in practice they are apt to be blended into clinical composites and several of these will be shown.

I. Volume Errors
II. Osmolar Errors
III. Compositional Errors (includes acid-base defects)
IV. Distributional Defects (sequestered or third space fluid)

A diagnosis is incomplete unless it considers each point above. The laboratory is of great importance in supplying the second and third points but is of no help in the first and fourth where the history and physical must be utilized.

Laboratory readings alone are only one facet of a patient's condition and can be misleading. For example, normal serum sodium values may be found in patients with shock from rapid fluid and electrolyte loss, and also in edematous patients with excess fluid and electrolytes due to heart failure.

Normal serum sodium in our hospital is 138 to 146 meq/L. Since it is the chief osmolar constituent

of extracellular fluid, including plasma, in practice we can relate osmolar tension directly to sodium levels, neglecting the potassium and anion fractions which are, of course, important in their own right for other reasons.

With a screening electrolyte report in hand, the clinician can construct his own "Gamblegram" ignoring the magnesium and calcium values on the cation side and the protein, sulfates and organic acids on the anion side. Each side should total about 145-150 meq L in normal osmolarity, and must be equal to each other because of the law of electrical neutrality of electrolyte fluids. For example, if cations total 135 meq L, anions must also total this amount. The body fluid in such a case would be hypotonic.

In this discussion, seven clinical conditions will be considered. In these, the first and second points of Moyer's concept are of chief importance, although the others can also be involved.

CONDITIONS ASSOCIATED WITH LOW SODIUM VALUES

1. *Water Intoxication*

This is an excess of body water combined with a lowered osmolar tension. It develops whenever there is a net gain of water and a net loss of electrolytes. It is the most common fluid electrolyte disorder and the one most often mistreated. Symptoms may range from simple "hospital headaches" to renal shutdown, convulsions, coma, and death.

Although the Chinese water torture was based on water intoxication, normal people handle excess water well unless they are given posterior pituitary extract.

Patients subject to stress, however, set in motion a chain of events which leads to dilution of the blood. This is part of the "Alarm reaction" described by Selye[4] and documented by F. D. Moore[5] and others. Antidiuresis is mediated by the posterior pituitary. There is a rapid mobilization of potassium and water from the cells. Potassium is excreted but sodium is retained at first. The stress may be from trauma, surgery, acute and many chronic visceral diseases, especially those of lung, liver, and kidney. Much of the water is endogenous. This is clearly a mechanism on the part of the body to maintain circulation in the face of a threat to it. Attempts to diurese the patient with distilled water and glucose are especially harmful. Electrolytes should be used with caution.

When the body water reaches a certain limit, sodium appears in the urine. This is related to the cessation of aldosterone secretion and is particularly inappropriate here for it further lowers the osmolar tension. It is as though the body senses the increased volume and instructs the kidneys to begin excretion of sodium. Adrenal cortical failure (Addison's Disease) and renal tubular disease will also cause loss of sodium and should be differentiated.

Now if this patient loses more electrolytes, either externally by vomiting, Wangensteen suction or diarrhea, or internally by low intestinal obstruction, burns, crush injury or massive infections, serious alterations develop in the body. In the brain, the situation becomes rapidly critical. The blood brain barrier is impervious to salt, and the brain takes up water to maintain equal osmolar pressures. The brain swells in its closed cage and symptoms of increased intracranial pressure develop. These progress through the textbook stages of compensation to decompensation and death.

As might be expected, the severity of symptoms and signs are directly related to the rapidity of onset of the condition. Thus coma may develop with a sodium no lower than 120, or the sodium may go even lower with fewer symptoms if the onset is more gradual.

The symptoms and signs of water intoxication are mostly those of the central nervous system already mentioned. Papilledema will develop if enough time has elapsed but is not essential for diagnosis. Also seen are headache, nausea, vomiting, dimness of vision, and cramping of muscles (heat cramps). There are signs of increased rate of extrarenal loss of water such as salivation, lacrimation, and watery diarrhea. Finger printing of the skin is a very useful sign when the weather is not hot. It is not a pitting edema but a characteristic sign which can be obtained over any bony prominence. The chest shows the signs of pulmonary edema and the renal signs are oliguria progressing to anuria. The differential diagnosis includes the other causes of low sodium to be discussed.

In treatment, prophylaxis is most important. Avoid excess water in susceptible patients, especially those losing electrolytes from any route. Thirst is a particularly unreliable symptom, especially with pain or shock. Patients with Wangensteen suction should not be allowed water by mouth. Tap water enemas may be dangerous, especially in children. Adequate therapy may prevent renal failure, including many causes of renal shutdown.

In the usual case of developed water intoxication, expectancy will generally suffice. These patients

lose water rapidly by extrarenal routes and, as they do, the renal functions improve and diuresis occurs. If there is severe renal insufficiency, or if CNS symptoms are severe, then hypertonic saline is justified. The physician must be certain that there is a true deficiency of sodium (see 2. below) for if there is not, pulmonary edema is particularly apt to develop and hard to treat. Hypertonic saline should be given slowly, in small infusions of 3% NaCl, not over 300 cc. at one time, with constant observation for pulmonary edema and thirst. The response may be dramatic. The patient should be re-observed and watched for diuresis before venturing another small infusion, if necessary.

2. *Low Sodium Concentration With Starvation* ("War Edema")

This is much less common but differentiation from the above condition is important. In this condition, total body stores of sodium are adequate. The edema is due to low protein (oncotic pressure). The sodium concentration is low but the therapeutic need is for calories, especially in the form of protein. It occurs, of course, not only in war, but in any chronically starved patient. The symptoms and signs are much like 7. below. In nephrosis, the pattern is similar, but the plasma defect is caused by the sodium losing tubules plus the low protein effect.

3. *Acute Desalting Water Loss*

The "desalting water loss" term was coined by Francis Moore (to replace the older term of dehydration). Although the acute form is less common than the chronic, (4. below) it is of intense interest. Much of the dramatic early work was done over one hundred years ago on cholera, the first published report being in "Lancet". Any acute loss of fluid and electrolyte can produce critical illness with shock and/or renal shutdown. Cases of cholera can be fatal in a matter of hours by this mechanism. Though the hematocrit may rise, the sodium may remain normal until the repair phase begins when it drops by dilution. Much of this repair water may be endogenous.

Treatment is with isotonic saline, adding potassium later as the renal output improves. If shock is present, colloid solutions, even blood, may be needed. Large quantities may be necessary and can be predicted on the basis of the increase in hematocrit, assuming the extracellular fluid to be 20% and the plasma to be 4% of the body weight.

In acutely ill patients, it is of importance to follow the urine output carefully as a guide to therapy. There is a mechanical contrivance now on the market which will allow for collection of hourly samples of urine in the absence of a special nurse.[6]

4. *Chronic Desalting Water Loss*

Chronic desalting water loss is much more common and thus of more importance, although less dramatic, than the acute. The patient appears sleepy and apathetic with loss of interest in smoking and in his surroundings. The skin is "sticky", (a sign less valuable in an older person), the eyeballs are soft and sunken. There is tachycardia and orthostatic hypotension, the veins collapse and are hard to needle. The tongue is wrinkled, longitudinally, and quite dry. Harpo Marx once pantomimed this condition by scratching a match on his tongue.

Diagnosis is made by history of loss of water and salt, as in chronic diarrhea, with the picture above, and the sodium concentration is low.

The treatment is similar to that listed above (3). There is also a need for potassium but this should not be pushed until renal output improves.

5. *True Desiccation*

This is hypertonicity due to water deprivation. It might also be caused by diabetes insipidus, excessive loss of water due to severe heat, or tracheotomy. Symptoms consist of thirst (if the patient is alert), restlessness, and if the room temperature is over 65°F., there should be an increase in body temperature and a warm, flushed skin. This is an atropine-like effect due to cessation of sweating. The sodium level will be over 140 meq/L. There is pre-renal azotemia. Treatment will be water by mouth or intravenously with glucose, if necessary, taking care to avoid excess water, particularly with renal insufficiency.

6. *Hypertonicity—Due to Solute Loading*

This is almost identical to the above except that it occurs only in unconscious patients who have been tube fed with excess ingestion of solutes over the water available. Since they cannot complain of thirst, they develop severe hypertonicity.

Finally, there is a condition in which, although the flame photometer gives a normal serum sodium reading, there is an excess of body water.

7. *Body Water Excess With Normal Sodium Level*

Actually, of course, the body sodium is in excess. This may be due to circulatory failure or it may be due to the excess infusion of sodium containing fluid, particularly in the presence of low body protein. So called "primary aldosteronism" with sodium retention can cause this picture. A final cause might be sudden overloading of the circulation due to the rapid reabsorption of large amounts of sequestered

fluid, for instance that due to surgical release of a low intestinal obstruction. The symptoms and signs are quite similar to those of low sodium concentration with starvation. These include pitting edema, distended veins, a loud p2, dyspnea on exertion, loud heart sounds, pounding pulse, diminished breath sounds, tachypnea, basilar rales, anasarca, vomiting, diarrhea, and edema of the viscera as seen at laparotomy.

COMPOSITIONAL DEFECTS

These can be divided into the main headings of potassium and calcium errors and defects in acid-base metabolism.

Potassium

Normal values in our hospital run between 4.1 and 5.6 meq/L. An abnormally high figure (hyperkalemia) is particularly apt to be associated with poor renal function or shutdown. It may also follow a rapid destruction of tissue or excessive response to trauma or stress. Overtreatment with potassium salts, even excess ingestion of fruit juices with low renal output, may cause hyperkalemia, particularly in stress situations. The chief danger is cardiac arrest, the heart stopping in diastole. The electrocardiogram is typical with higher T waves and ST segments, progressing to disappearance of T waves and heart block. The gastrointestinal signs are those formerly ascribed to uremic enteritis and include nausea, intermittent colic and diarrhea which may be bloody. Since the laboratory can only measure the plasma fraction of potassium, and this is such a small proportion of that actually contained in the body, it is important to anticipate potassium errors by history, physical examination, and electrocardiographic study before the laboratory readings become excessive.

The treatment of potassium excess is its prevention, particularly under the conditions described above. Efforts should be made to encourage renal function. Digitalis is particularly dangerous with high potassium and should be used only when specifically indicated.

Potassium deficits (hypokalemia) should be anticipated whenever there is severe illness or starving with wasting of body substances. The normal stores of potassium are lost through the kidneys and must be replaced either by ingestion as food or by parenteral fluids containing significant amounts of potassium. Ringer's solution is not one of these and isotonic saline will dilute potassium and make the existing situation worse.

The symptoms and signs of moderate deficit of potassium are weakness, anorexia, and muscle tremors with hyperactive reflexes and speech. The EKG shows low voltage with a flat T wave and depressed ST segments. Clinically, the muscles feel soft and the patient is apathetic. He may improve a little and then become worse after infusion of ordinary Ringer's or normal saline.

With further depletion of potassium, the above signs become much worse and there is great muscular weakness which may terminate in flaccid paralysis with absent tendon reflexes. There is disorientation progressing to coma. The patient picks at his bed clothes (carphologia), the muscles feel like half-emptied hot water bottles and the body takes on the configuration of the cadaver on a marble slab. Early postoperative obstruction, due to ileus, can often be much improved by energetic treatment with potassium.

The treatment of hypokalemia includes its prevention by anticipation and using significant amounts of potassium in the repair fluids. Electrolyte #1, or #2, as put out by Baxter Laboratories, is a satisfactory repair solution. Potassium salts may be given by mouth as enteric-coated tablets but are best given as food, particularly fruit juice, provided that it is tolerated. In desperate conditions in which an excess of water is not wished, potassium may be given in concentrations as high as .4%. It should always be given slowly and intravenously, particularly with impaired renal output or with a patient who is receiving digitalis.

Calcium Deficits

In our hospital, the normal adult calcium level is 9 to 10.5 mg. per cent. There are only about 10 grams of ionized calcium in the entire extracellular fluid and deficits occur rapidly. Acute pancreatitis, generalized peritonitis, massive infection such as hospital gangrene and burns during the sloughing and early granulation stages are examples of conditions which rapidly use up the body calcium.

With the rapid depletion of serum calcium, mobilization from the bones cannot keep up and symptoms may develop rapidly. A separate cause of low plasma calcium is the giving of repeated citrated blood transfusions where the excess citrate removes the ionized calcium from the plasma. The rapid repair of large extracellular fluid deficits using fluids without calcium may cause the rapid onset of symptoms.

In practice, of course, the most common cause of the low calcium syndromes is that due to hysteria

with overventilation and respiratory alkalosis as described below.

The symptoms and signs are identical with those following ablation of parathyroid tissue and are: numbness and tingling of the extremities, nose and ears, cramping of muscles, hyperactive reflexes, Chvostek's sign, progressing to sustained clonus with respiratory stridor and typical tetanic convulsions.

Acid-Base Deficits

The mechanism for the control of body pH is most interesting and complicated; clinically, however, it can be reduced to rather simple principles. Body pH is maintained rather closely within the range of 7.35 to 7.45. The end products of metabolism are acid and the body normally excretes this acid via the lungs and kidneys. Now there may be fluctuations in acidity such as those due to gastric digestion with its alkaline tide of urine, or losses of acid due to vomiting, or excess acid due to renal failure or diabetes mellitus. Respiratory changes and diseases of the lung affect the excretion of carbon dioxide. In any of these conditions, the pH of the body is only very slightly affected except in the extremes of disease due to the remarkable group of buffers. Buffers act as shock absorbers taking up and balancing the excess acid or base so as to keep the body pH normal. Next, the body has to excrete the offending agent in order to restore the efficiency of its buffer systems. The main agent for doing this is the kidney which has several systems but is somewhat slow and ponderous. The lungs are the rapid, volatile method for losing or retaining carbon dioxide to maintain normal pH.

In the lungs, this system consists of carbonic acid, the blood bicarbonates and carbonic anhydrase, which, of course, is the enzyme for the breaking down of carbonic acid to CO_2 and water. The ratio of bicarbonates to carbonic acid in health is 20:1. This is the most common and most important example of the Henderson-Hasselbach equation for buffered solutions. So we see that if excess acid or base is absorbed by the body, in order to maintain normal pH, the lungs excrete or hold back on carbon dioxide to maintain the ratio at 20:1.

For example, in diabetes mellitus, the excess acids are rapidly taken up by the buffer systems and the pH stays within the normal range, at least at first. In this patient, the laboratory would show a lowered CO_2 combining power, formerly known as alkaline reserve. The body excretes the excess carbonic acids via the lungs as evidence by Kussmal breathing. Conversely, should the body lose acid as with excessive vomiting, the bicarbonate values would go up and breathing become shallow to retain carbon dioxide.

Aberrations of respiration are, of course, possible and this explains the alkalosis that develops with the overbreathing of hysteria. The abnormally lowered CO_2 swings the ratio to the alkaline side. This situation normally does not persist long enough for the kidneys to compensate it by retention of bicarbonate.

Actually, there are about nine conditions of acid-base imbalance, the more important of which have already been described. The remainder of these fit nicely into the following graph adapted from Peters and Van Slyke.[7]

This graph may be a nightmare to the average freshman medical student but it actually correlates very nicely the relations between pH, carbon dioxide tension in the lungs, and the CO_2CP in the plasma. One sees that when the pH swings either to the left or to the right of the extremes noted for body health, then a decompensated condition exists. One further sees that even though the pH is within the extremes for body health, compensated clinical acidosis or alkalosis may exist. These conditions may be metabolic or respiratory. One finally sees that the extreme acidity for the body in life is about 7.0. (Even this is not compatible with much duration of life.)

Respiratory Acidosis

This is due to inability of the body to properly excrete carbon dioxide. This accumulates carbonic acid and tilts the ratio towards the acid side. Clinically, it is due probably most often to poor anesthesia; for example, a closed anesthesia system with a poor CO_2 resorbing system or excess dead space in the tubing. Other causes might be severe respiratory infections, morphinism, pulmonary emphysema or fibrosis, cardiac failure, respiratory obstruction from any cause, and crushing injuries of the chest. This is probably a common cause of death in drowning. The only way that it can be accurately diagnosed is by taking a blood pH reading and the only satisfactory treatment is adequate ventilation. The existence of the condition is one of the best arguments for early tracheotomy.

F. D. Moore[2] has emphasized the extreme rapidity with which respiratory acidosis can develop to fatal levels in a patient who appears to be of good color. There is no direct relation with oxygenation. The patient may look pink and the blood pressure curve may increase or can give no warning. It is prob-

ably the most common cause of ventricular fibrillation. Since the diagnosis is so difficult, anticipation and prevention are the keystones of treatment.

unless the CO_2CP is below 30 meq/L and falling. As is so often the case, the best treatment is anticipation and prevention. Good preoperative repair

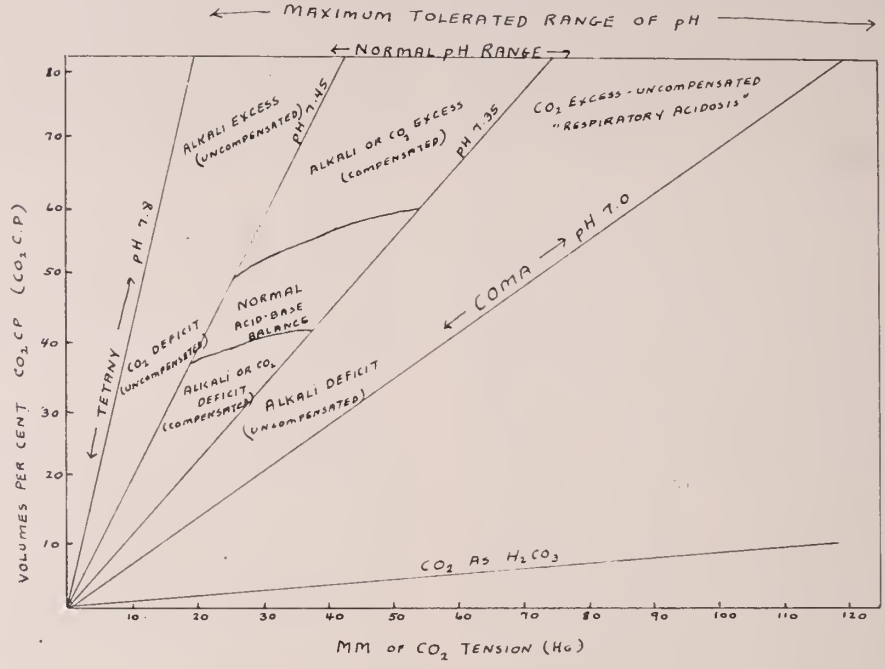


CHART I

AFTER VAN SLYKE

Hypokalemic Alkalosis

This is a compositional defect of great clinical importance, although somewhat rare in practice. Clinically, this follows excessive vomiting in a patient with normal or increased gastric acid; the classical indication is an obstructed active duodenal ulcer. The patient loses large amounts of gastric fluid and he starves, and in so doing, mobilizes large amounts of body protein, potassium and water. These are lost in the vomitus and also through the kidneys.

The usual laboratory picture is a high pH and CO_2CP with low chloride and potassium. The sodium concentration may be normal. The urinary volume is generally normal and is, in part, responsible for the loss of potassium. Actually, hypokalemia is not seen with established anuria.

It is very difficult to reproduce hypokalemic alkalosis although this has been done in healthy medical students by giving large amounts of ACTH and keeping them on gastric suction.

In practice, the patient may have done fairly well until he is submitted to surgery. At this time, because of the stress conditions previously described, and dilution by endogenous and parenterally given fluids, the situation becomes much worse. The borderline condition may become critical. Moore states that such a patient should never be operated upon fluids should contain adequate amounts of potassium and if the situation is acute, ammonium chloride, 1% may be indicated.

In the study of acid-base problems, the hospital which is fortunate enough to have a potentiometer can get an accurate estimate of the patient's exact condition by a pH reading and a CO_2CP. Reference to chart I should establish the chemical diagnosis. To know the CO_2 only is somewhat like knowing the latitude without knowing the longitude. Having the pH reading fixes the condition accurately. If such a reading is not available, the clinician can substitute the history and physical with particular reference to the state and character of the respirations and pH of the urine.

It is here appropriate to mention that the CO_2CP should be reported by the laboratory both as volumes per cent and in milliequivalents. This is because clinicians long accustomed to interpreting results in volumes per cent may be misled by the milliequivalent report which is, of course, less than half that of the former. There have actually been cases in which patients with normal values have been mistakenly treated for acidosis.

The above does not detract from an enthusiastic acceptance of the milliequivalent system which is far superior to milligrams in computing osmolar-

values. It has been well said that to compare electrolytes by weight is as illogical as is to compare engines by pounds. The milliequivalent system gives interchangeable units, of particular value in computing osmolarity.

DISTRIBUTIONAL SHIFTS

This is the fourth and final phase of Moyer's descriptive system.

It is easy to lose sight of the fact that in a 160-pound male, a one-plus generalized edema can sequester 3000 cc. of fluid. Similarly, burns, massive infections or allergy, pancreatitis and crush injuries can cause profound occult depletions in a matter of hours. This fluid is lost to the body economy just as though it has drained externally. Another example of translocation of fluid is that which obtains in low intestinal obstruction. These are examples of what has been called "third body space for loss of fluid". Low intestinal obstructions may be particularly insidious from a fluid standpoint because, unlike the higher obstructions, there may be no vomiting and large amounts of fluid may be translocated into the lumen and into the edematous wall of the gut. An illustrative case report (Case IV) is appended to this paper.

Low intestinal obstructions require large amounts of repair solutions in the critical case as do other types of distributional errors.

Reabsorption of this sequestered fluid occurs, of course, if the patient recovers and may flood his circulation with excess fluid and electrolytes. This is well known in cardiac lesions but is less generally appreciated with the diuresis that occurs with burns, crush injuries, and intestinal obstruction. If there is impaired renal and cardiac function, this danger may be much more acute.

The diagnosis of the flood tide of diuresis, therebefore, may be critical. Good nursing care is imperative.[6]

It is here pertinent to mention the dangers of overtransfusion of blood. Patients with rapid depletion of extracellular fluid may present a shock-like picture which is quite similar to that due to hemorrhagic shock. It is granted that some of these patients need both blood and repair solutions of electrolytes and fluid. However, once the need for whole blood has been met, excess blood can be disastrous for the continuing need, of course, is for repair solutions of fluids and electrolyte and blood is contraindicated. Blood volume studies, when available, can be most helpful.

When the need for whole blood has been met and the patient does not do well, or responds and then relapses into a shock-like condition, the question lies between continuing hemorrhage or the need for more repair solution. Further blood, if not indicated, can be most dangerous causing pulmonary edema, right-sided heart failure, and an iatrogenic lung condition best described as "liver lungs" in which the pulmonary circulation is crammed with blood cells and the patient dies of overtransfusion of blood and underinfusion of fluids and electrolytes.

The morbidity and mortality of blood transfusions are well known. At least 3000 deaths yearly are directly ascribed to transfusion reactions. The mortality for simple blood transfusion is probably as great as that for simple appendectomy.

Transfusions of whole blood should logically be given before the dilution effect has occurred, for at this time, the strain on the circulation may be significant. Also, the postoperative hydremia previously described gives a false picture of anemia just as the time when the transfusion is most hazardous from the circulatory standpoint.

The several clinical states described above cover the main variations possible with fluid and electrolyte imbalance. It should be remembered that it is not only possible but probable that combinations of these will exist clinically. Obviously, also, similar effects will have additive values and opposing effects may cancel each other; for example, the body temperature may be driven up by osmolar over concentration and down by ECF deficit with a normal temperature as a net result.

TREATMENT

The details of treatment have already been alluded to in describing the several conditions noted above. Certain principles should be stated here. Usually disturbances of volume and osmolarity can be treated together but the priority, if any, should be given osmolar errors for these may seriously handicap the body economy. Accurate diagnosis is imperative, for error may be fatal.

In selecting the solution for repair, if there is an acid-base imbalance, this deserves next priority. Of these acidosis is the most pressing and should be treated with sixth molar sodium lactate or Hartman's solution, giving enough to control dyspnea. With alkalosis, potassium chloride will usually suffice if there is good renal function; if not, or if the need is pressing, dilute hydrochloric acid or 1% ammonium chloride solutions are available, although somewhat exotic.

When osmolarity is increased, water will be necessary. Give glucose and water parenterally if the oral route is not available. There is some risk of cardiac strain, which can be dealt with separately if it supervenes. Pure distilled water is still found in some hospitals and can be given inadvertently with certain hemolysis and renal damage which may be fatal. For this reason it should not be marketed or stocked.

For potassium deficiency, ordinary Ringer's solution is entirely inadequate because of the tremendous amounts needed to replenish the intracellular space. Repair solutions with up to 36 meq./L (Baxter's #1) to the liter are commercially available. The total body deficiency may be over ten times this amount, but fortunately, most of this can later be given as food or fruit juice as the clinical condition improves and the ileus subsides. The common tendency is to undertreat potassium deficiencies. Treatment should be vigorous provided renal output is adequate.

In the absence of peripheral circulatory failure and ileus, all routes are efficient. With such failure, only the intravenous route is dependable. As soon as possible, the patient should be begun on fluids by mouth. Oral nutrition is always best if it is permissible.

In the event of mass casualties, parenteral fluids will obviously be logistically impractical and the National Research Council has recommended the following mixture for use by mouth: To the quart of water, one teaspoon each of baking soda and table salt. This gives a fairly palatable saline mixture of 0.6% which is far superior to water. This mixture can be quite useful in ordinary practice, and in the event of mass casualties, it could save many lives from death due to shocking ECF deficit.

SUMMARY

Dehydration and overhydration are no longer complete terms medically. Although the individual problem may be complicated, use of a four-point descriptive diagnosis permits rational therapy.

Clinical signs and symptoms may be equivocal or misleading; flame photometry, pH measurement, and the milliequivalent concept simplify bedside management. Clinical judgment is of major importance in rational application of laboratory data which can be normal even in the face of severe clinical disease.

A rational approach to fluid therapy leans heavily on the laboratory, particularly for osmolar and compositional errors. The best therapy, however, is founded on sound clinical judgment built upon distinct physiologic principles.

Good treatment is based on constant repeated reevaluation of the critically ill patient rather than adding large amount of fluid and electrolytes which may, or may not, be indicated on the patient's first evaluation. This is particularly true in using exotic or hypertonic fluids.

Several of the common clinical conditions are described and of these, the most common is undoubtedly water intoxication.

Since the signs of severe fluid depletion can stimulate and complicate the need for blood, overtreatment with blood is possible and is to be particularly avoided.

ILLUSTRATIVE CASE ABSTRACTS

Case 1. Water Intoxication. WM, 19, had colostomy for GSW. Vomiting began at sight of dressings. He drank large amounts of water. On the 5th day, he became maniacal and then went into convulsions. There was profuse salivation and multiple watery colostomy movements. PE showed "fingerprinting", signs of ECF. Plasma cl. was 74 meq. and CO_2CP 34 meq. Patient received isotonic saline and showed some improvement, but convulsions continued. He was then given 500 ml. of a 3% solution of NaCl and regained consciousness. Water was withheld. The infusion was repeated once. Electrolytes returned to normal and the patient felt well.

Case 2. WM, 73, became despondent and refused to eat. He became stuporous and displayed classical signs of ECF and K deficit. He was mistakenly treated with glucose and DW; he developed fine moist rales and diminished osmolarity. He was next treated with Ringer's solution plus potassium plus extra potassium. He became alert and resumed smoking, walking and eating.

Case 3. Hypokalemic Alkalosis. WM, 45, had an active peptic ulcer. He had been vomiting for two weeks. He was apathetic and listless and showed signs of ECF and K depletion, with potassium 2.5 meq., sodium 120, chlorides 90, and CO_2CP 35 meq. or 77 volumes per cent.

This patient should be treated with large amounts of repair solutions which include both Na and K in significant amounts. His renal function is good and the CO_2CP should be at least 30 meq. and falling before operation is scheduled. These patients tend to become much worse after the strain of surgery.

Case 4. Distributional Defects. WF, 41, six days

following hysterectomy, this patient suddenly obstructed three inches above the ileocecal valve. At operation, the entire small bowel was tensely distended and contained large amounts of fluid and gas. Ileo-transversecolostomy was done and approximately four quarts of intestinal fluid were removed by aspiration. However, despite aspiration from two other sites, at least this amount of fluid could not be removed from the gut. There was possibly a similar amount sequestered in the edematous wall of the gut. Postoperatively, over a period of twelve hours, the patient received 13,000 cc. of repair solution (Electrolyte #1) but despite the fact that she received only glucose and water for the remainder of her somewhat protracted and stormy course, the concentrations of serum electrolytes progressed from low to high normal as the patient decompressed and peristalsis resumed.

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House Plant Causes Dermatitis

Some species of the popular house plant philodendron have been found to cause a skin eruption similar to that produced by poison oak.

Writing in the September Archives of Dermatology, published by the American Medical Association, two Los Angeles doctors said contact with philodendron leaves produces red blotches and streaks of tiny blisters. They usually occur on the hands and forearms, although they may occur other places.

The number of cases of dermatitis resulting from contact with philodendron is probably greater than generally thought, especially since philodendrons are increasing in popularity as house plants. The doctors have seen at least 12 cases of philodendron-caused dermatitis in the last few years. The medical literature mentions other cases.

There are approximately 100 species of the genus. The most popular as a house plant is Philodendron cordatum, a vine with small, heart-shaped, glossy leaves. Another is P. selloum, which has large divided leaves and grows in a mound. The genus belongs to a family different from that to which the poison oak and poison ivy plants belong, although the skin eruptions produced by the plants look alike.

The skin eruptions generally clear after the exposure to the plants is ended.

Authors of the article are Dr. Samuel Ayres Jr. and Samuel Ayres III.

Cervical Tuberculous Lymphadenitis in Childhood

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AS A DISEASE ENTITY, scrofula, or cervical tuberculous lymphadenitis, has long been with us. It gained its early name, "the king's evil", when Edward the Confessor (1042) initiated in England the practice of using the "king's touch" to treat the disease. It is suggested that this custom was an imported one, having been originated by Clovis, king of the Franks in the 5th Century. Charles II was the king who brought the practice to its height in England by treating 10,000 cases a year with his royal touch. Queen Anne was the last monarch to continue the custom and it is said that she did so with considerable distaste. One of her last patients was Samuel Johnson, as an infant, but a cure was not effected and his scrofula continued to drain even as an adult.[1] In the 35 years preceding the discovery and use of antituberculous drugs, the surgical procedure of extensive dissection was standard treatment of this condition. This paper presents a summary of our experience in treating 15 children with tuberculous lymphadenitis of the cervical lymph nodes during the past six years.

The treatment of cervical tuberculous lymphadenitis in children has received little study since the advent of the present era of specific antimicrobial therapy. The former practice of block dissection with its resulting deformities and attendant risks to important structures is not now justified. As compared to the number of articles concerning the treatment of pulmonary tuberculosis and certain forms of extrapulmonary tuberculosis, there have been few articles in recent years discussing the topic of tuberculous lymphadenitis in general; and these articles, for the most part, have been more concerned with the condition in adulthood.[1,2,3,4] We believe this condition to have a much more favorable prognosis in children than in adults, for in childhood there is a tendency for the disease to be limited to the lymph nodes.[1]

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DISCUSSION OF CASES

Nine adults and 15 children (under the age of 14 years) admitted to the University of Virginia Hospital between July 1951 and March 1957 were diagnosed as having cervical tuberculous lymphadenitis. A survey of the hospital charts of the nine adults indicated the cervical infection to be most often a manifestation of a generalized tuberculosis and there were several fatalities in this adult group. The pertinent points concerning the 15 children with cervical tuberculous lymphadenitis are summarized in Table I. During this same period of time there were 55 pediatric patients admitted with other forms of tuberculosis, and, from routine tuberculin testing of all pediatric patients, 11 other children were found to have positive tuberculin tests without demonstrable evidence of infection.

The diagnosis in all but three of our 15 patients (#2, 14, 15) was substantiated by demonstrating the organism on culture and/or by finding the organism in material smeared from the nodes or in microscopic sections of tissue removed. In these three patients the diagnosis was inferred by the microscopic findings of a granulomatous inflammation of lymph nodes which were consistent with tuberculosis. These three children had positive tuberculin tests. In another patient (#7) the organism was not demonstrated by culture or by microscopic sections of the node, but organisms were seen in microscopic sections of a tonsil when a tonsillectomy was later performed. This tonsillectomy was not performed in treatment of the tuberculosis but to remove greatly enlarged and recurrently infected tonsils. If the entire infected node is not removed, we believe that the organisms are better demonstrated in tissue removed from the abscess wall by biopsy than from smears of the purulent material alone, although both methods should be used.

Only one patient failed to give a positive tuberculin test. This child (#1) did not respond to old tuberculin testing in the strengths of 1:10,000,

TABLE I

TUBERCULOUS LYMPHADENITIS IN CHILDHOOD

Case No.	Race	Sex	Age	Location of the Adenopathy	Duration of the Adenopathy	Tbcln Test	Proven by Smears or Sections	Proven by Culture	Type of Surgical Therapy	Drugs Used Initially	Drugs Used Long Term	Duration of Drug Therapy	Results of Therapy	Other Tuberculous Disease
1	C	F	28 mos.	Submental	2 mos.	Neg(1)	Yes	No	Total excision	S P	S P	No follow-up		No
2	C	F	10 yrs.	Right supraclavicular, high	2 wks.	+	(12)	No	I and D	None	None	None	Good	(2)
3	W	M	4 yrs.	Left anterior neck	3 wks.	+	Yes	No	Total excision	S X-Ray	S	No follow-up		No
4	C	F	28 mos.	Left mandibular angle	3 wks.	+(3)	Yes	Yes	I and D	S P	S P	8 mos.	Good	No
5	W	F	22 mos.	Right submandibular	2 wks.	+(4)	Yes	No	Partial resection	S P I X-Ray	S P I	6 mos.(5)	Good	No
6	C	F	12 yrs.	Right supraclavicular, high	1 wk.	+	Yes	No	Biopsy	S P I	S P I	12 mos.(5)	Good	(6)
7	C	M	18 mos.	Bilateral ant. cervical	4 mos.	+	(7)	No	Biopsy, T and A	S P I	S P I	6 mos.(5)	Good	No(7)
8	W	F	31 mos.	Left mandibular angle	3 mos.	+	Not done	Yes	I and D	S P I	S P I	7 mos.	Good	No
9	W	F	20 mos.	Right preauricular	2 wks.	+	Yes	No	Needle biopsy	S P I	S P I	11 mos.(5)	Good	No
10	C	F	26 mos.	Right submandibular	4 mos.	+	Not done	Yes	I and D(8)	S P I	S P I	12 mos.	Good	No
11	W	M	24 mos.	Left post. cervical	5 mos.	+(9)	Yes	No	I and D(8)	S P I	S P I	6 mos.	Good	No
12	W	F	34 mos.	Left mandibular angle	6 wks.	+	Yes	Yes	I and D(8)	S	S P I	6 mos.	Good	No
13	W	F	28 mos.	Right submandibular	2 wks.	+(10)	Yes	No	I and D	S	P I	(11)	Good	No
14	C	F	10 yrs.	Right submandibular	3 mos.	+	(12)	No	Total excision	P I	S P I	(11)	Good	(13)
15	C	F	4 yrs.	Submental	2 wks.	+(14)	(12)	No	I and D	S P I	S P I	over 4 mos.	Good	No

(1) Old tuberculin (O.T.) negative at strengths of 1:10,000, 1:1000, 1:333.
(2) Possible pulmonary cavity at 2 years of age.
(3) Positive Volmer patch test, negative O.T. 1:10,000.
(4) Negative Volmer patch test, negative O.T. 1:10,000, positive O.T. 1:1000.
(5) Streptomycin discontinued after 3 months.
(6) Possible X-Ray evidence of hilar tuberculosis. Systemic symptoms for 2 months.
(7) Acid-fast bacilli seen in sections of the tonsil but not in the node.
(8) Wound packed with gauze and irrigated with "Varidase".
(9) Negative O.T. 1:10,000, positive O.T. 1:1000 and Volmer patch test.
(10) Negative O.T. 1:10,000, positive Volmer patch test.
(11) Being treated at this time.
(12) No acid-fast bacilli seen, but a "granulomatous inflammation of a node, consistent with tuberculosis."
(13) History of possible hilar tuberculosis; positive tuberculin for 4 years.
(14) Tuberculin test negative 4 months prior.

DRUG SYMBOLS: S—streptomycin
I—isoniazid
P—P.A.S.

1:1000, or 1:333. despite his having had lymphadenopathy for two months. A Volmer patch test was never applied to this patient. Several other patients failed to show a response to either the Volmer patch test or to the weaker dilution samples of old tuberculin, but all except patient #1 showed a response to at least one of the methods of tuberculin skin testing when several methods were used. One should never rely on a single negative tuberculin test when there is a reasonable possibility of the presence of tuberculosis, and in these cases, we repeat the skin testing using several strength solutions of old tuberculin and apply the Volmer patch test also.

A possible source of infection was found for only five of the 15 patients, and this source was usually some member of the immediate family. No attempt was made to distinguish between human and bovine organisms cultured from the lesions but none of the infections had a proven bovine origin. Testing of cows did reveal the fact that one family obtained its milk from a cow which had a positive Bang's test but the child's brucella agglutinations were negative.

Of the 15 children, only one had demonstrable evidence of tuberculosis elsewhere. This patient (#6), a 12 year old colored female, had x-ray findings consistent with hilar tuberculosis and she had experienced systemic symptoms for two months. Two other patients, both 10 year old colored females, may have had tuberculosis in the past. One of these (#2) may have had a pulmonary cavity at the age of two years. The other (#13) was thought to have had hilar tuberculosis previously and was known to have had a positive tuberculin test four years prior to her being seen at this hospital.

All 15 patients were subjected to a surgical procedure of one type or another. In one instance a needle biopsy only was performed. Total local excision was carried out in three instances, partial resection in one, biopsy in two, and incision and drainage in the remaining eight. The cases necessitating incision and drainage were those in which the mass was fluctuant and early skin changes had appeared. In three of the eight children whose lesions necessitated incision and drainage, the wounds were packed with gauze and were irrigated with a streptokinase-streptodornase solution.* We believe that the three so treated showed earlier healing and less scarring than did the five patients who did not receive this added form of therapy. We believe a surgical procedure is warranted in all cases in which the diagnosis may be doubted, if only for diagnostic purposes prior to scheduling a patient for a long term of antituberculous therapy. Post-operative secondary infections occurred in only two of our patients. The first, a streptococcal stitch infection, responded quickly to penicillin. The second, a pseudomonas infection, was treated with acetic acid compresses and healed well, showing little scarring.

Only one child (#2) received no drug therapy and he was treated only with incision and drainage with good results. He would have also been given at least two of the antituberculous drugs if he had been treated later in the series. X-ray therapy was used in only two instances, with streptomycin alone in one patient and with streptomycin, para-aminosalicylic acid (P.A.S.) and isoniazid in another. The therapeutic agents used for each patient are indicated in Table I. The duration of drug therapy was one year in two cases, 11 months in one, eight months in one, seven month in one, over four months in another, and six months in four. Two patients are presently being treated with drugs. The duration of drug therapy for the remaining two is not known to us. Streptomycin was used in the dosage of 40 mgs./kg. of body weight per day, initially divided into two doses a day and later given only two or three times a week. When given with isoniazid and P.A.S. in long term therapy, we often discontinue the streptomycin at the end of three months. Isoniazid was given as 6 mgs./kg./day in four divided doses. P.A.S. was given as 0.3 gms./kg./day in four divided doses. The duration of drug therapy was dependent on the rate of dissolution of the nodes and the consistency of the nodes. There were no adverse reactions to any of the three drugs used. In the 13 patients followed by us, there has been no progression or recurrence of the disease during the period of drug therapy or after discontinuation of the drugs.

DISCUSSION

Cervical tuberculous lymphadenitis in the adult is generally considered to be a more serious condition than when it occurs in childhood. In the adult it is very often a manifestation of generalized tuberculosis no less than axillary, intrathoracic, or abdominal lymph node tuberculosis.[1,2,3] In contrast, the condition is much more likely to be a local process in children and to require a shorter course of therapy if the presence of other forms of tuberculosis is not found. Of the 25 children reported by Kendig and Wiley,[4] only two (8%) had other tuberculosis when first treated. Only 12% of the children in one large series had had no other demonstrable evidence of

*"Varidase" (Lederle)

tuberculosis while they were in a sanatorium.[1] We wonder whether this figure may be used generally for it is not the practice in our locality to give sanatorium care to children who have cervical node involvement only. No active lesion could be found other than that in the nodes in 45% of patients in another series which presumably covered all age groups.[5]

The prevalence of isolated cervical tuberculosis in childhood is most likely due to the ready portal of entry to the tuberculous bacilli through the tonsils, adenoids, and other components of Waldeyer's ring. With this entry, the primary infection is in the lymphoid tissue of the pharynx with the node involvement becoming prominent after the organisms are carried to the regional lymph nodes by macrophages. When first palpable, the nodes are firm and discrete. They later become matted when a periadenitis occurs and may then become attached to surrounding structures. The nodes may become moderately tender and later caseate to form abscesses which rupture through the node capsule, the fascial layers, and finally through the skin as a "collar stud" abscess. The sinus tract thus formed may drain a thin serous material for years if not treated. Secondary pseudomonas infections are not uncommon. In some instances abscess formation does not occur and the nodes may become fibrous and calcified. The finding of calcified lymph nodes in the neck by x-rays in later life may be the first indication that an individual once had a tuberculous infection.

Isoniazid (isonicotonic acid hydrazide) is probably the most valuable of the three commonly used antituberculous drugs. A potent tuberculostatic agent, isoniazid and/or its metabolites will diffuse into dense caseous lesions and are present in high concentrations three to five hours after administration of the drug.[6] This excellent diffusion is probably due to the small size of the molecule. However, isoniazid should be used only with the concomitant administration of P.A.S. since P.A.S. seems to inhibit the development of isoniazid-resistant strains of *Mycobacterium tuberculosis*. For similar reasons, P.A.S. should also be administered when streptomycin is used. It is quite probable that excellent results could be obtained in tuberculous lymphadenitis with isoniazid and P.A.S. as the only drugs used. We have, for some time, favored the added use of streptomycin from the pre-operative period until the end of three months, after which isoniazid and P.A.S. are continued for several months after the infection has been considered cured.

Short term therapy, i.e., up to 120 days, is frequently followed by local relapse or the development of active foci elsewhere and it is probably wise to continue the chemotherapeutic regimen for four months after complete stability of the lesion has been achieved.[2,3] We disagree with the impression that no course of treatment should be shorter than a year in duration.[3] We feel that good and long lasting results can be obtained after only six months of chemotherapy if the lesions have shown regression and stabilization. If other tuberculous infection is present, the period of chemotherapy should be extended considerably. After discontinuation of the drugs, we follow our patients at increasing time intervals to guard against recurrence.

The surgical treatment of this condition should be conservative in nature. An early operation is not indicated if abscess rupture and sinus formation have already occurred when the patient is first seen. If, after a course of drug therapy for six months, there persists an unhealed sinus or a residual mass of nodes, an excision operation is then indicated.[1] One should keep in mind that a secondary infection may be the cause of persistent drainage from an adequately treated sinus tract and may respond well to appropriate antibiotics. A plastic surgical procedure is often desirable at this time to replace nature's ugly scar with a more desirable surgical one. Surgical procedures are unnecessary when the nodes are not fluctuant in patients who have proven tuberculosis elsewhere in the body. Most of these will show resolution on drug therapy alone and the longer that excision of superficial nodes is deferred the less frequently it will still be considered necessary.[2] We believe that a diagnostic operative procedure is warranted if a positive tuberculin test is the only evidence that a lymphadenopathy may be tuberculous in origin. Unresolved pyogenic lymphadenopathy, tumor, and other conditions may coexist with a positive tuberculin test. Total excision is the procedure of choice when the node mass is small, whereas biopsy alone is satisfactory when complete removal is not feasible. Incision and drainage is indicated when the mass is fluctuant and early overlying skin changes have taken place for a neat surgical scar is more desirable than the one resulting from spontaneous rupture. There is little danger of creating a draining sinus by operation if antituberculous drugs are used. Earlier healing and better operative results seem to occur when the abscess cavity is packed with streptokinase-streptodornase soaked gauze and irrigated with a solution of these

enzymes for several post-operative days. This procedure is modified from that devised by Hazlehurst.[7]

SUMMARY

Cervical tuberculous lymphadenitis in childhood has received very little attention since the advent of specific antituberculous drug therapy. The few medical articles in recent years about this condition in general have, and we believe unfairly, considered the disease in childhood to be analogous to that occurring in adulthood. In our experience, the condition in childhood has a much better prognosis since it is less likely to be a manifestation of a generalized tuberculosis as is so often the case in adulthood. Being, in general, a localized and peripheral form of tuberculosis when occurring in children, the duration of the antituberculous drug therapy does not need to be as lengthy as it is in adults. Our experience with 15 patients over a six year period is presented and the present day drug and surgical treatment are reviewed.

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"Decision for Research"

As a part of the Heart Association's campaign to recruit many more "young, capable, energetic minds" for research in the medical and biological sciences, the American Heart Association has published an 8-page booklet entitled "Decision for Research," Dr. George S. Grier, III, Newport News, President of the Virginia Heart Association, has pointed out. This booklet is available free of charge from Virginia Heart Association, 12 South Third St., Richmond 19, Va.

The shortage of young people entering medical research has been termed critical by Heart Association officials. Young people are vitally needed as scientific investigators if the major diseases are to be conquered and the goal of universal good health is approached more closely.

The booklet, "Decision for Research," states that many great questions in medicine are still unanswered.

"We still do not now," it notes, "what makes the blood clot . . . or the heart beat . . . or why cells run wild and become cancerous . . . or why some babies are born imperfect. These and many other problems can and will one day be solved by people —and not by machines . . . by people who have learned there is no more glorious mission than to take part in this struggle for life."

The booklet urges science-minded teen-agers to take stock now and consider whether they are cut out for research careers. Students are counseled to ask themselves whether they like to learn things for their own sake; whether they are patient, persistent, and original in work, and whether they can accept failure in experimentation as well as success. Students who can answer "yes" to these questions have the basic qualities needed for scientific investigation, according to the booklet.

Mental Health . . . .

BENEDICT NAGLER, M.D.

The Family Physician and Mental Retardation

The parents of a child, age two, consult their family physician: "He did not develop like his brother and sister, he does not sit up, he does not talk. What shall we do?" The school reports: "Johnny, age nine, does not grasp what is taught. He stayed back twice, the last promotion was just to please him or maybe his teachers. We cannot keep him in our school system. He is not a boy who should stay in school." The social agency reports: "Mary is a problem. She cannot learn in school. She does not get along with others. Now she is 'boy crazy'. She is fourteen years old and her intelligence shows that she is subnormal in her mental functioning. Something has to be done." The obstetrician, pediatrician, or family physician takes one look at the newborn: "abnormal development—mongolism."

What is the family physician's advice? Twenty years ago the answer would have been: "Put him away." To the parents he would have said: "Forget about this child. He will be well off in a state institution. He will need the protected life. You think about your own life, your own future, and that of your other children. Also society will be protected against this individual." This advice would not have been any different from that given forty years ago in the case of a patient with epilepsy or a psychosis and fifty or sixty years ago if the patient had tuberculosis: "Put him away; forget about him; protect him from the world; protect society against him." This advice would have been given without even thinking about the possibility of management on the outside.

We have changed our attitude when thinking about tuberculosis, mental illness, epilepsy (or at least should have changed it). Where do we stand in our thinking about mental retardation?

No attempt will be made here to discuss "medical" treatment, the little we have to offer at the present time in a few well-defined clinical entities as, for example, cretinism, or to outline the present approaches in the field of education, training, rehabilitation, or psycho-therapy where indicated. Only the one question will be discussed: "Where should the child grow up?"

For example, suppose that the infant has the stigma of mental defect or growth disturbance, named "mongolism", or another type of mental retardation has been diagnosed in infancy or early childhood. Many leading authorities in this field agree that early institutionalization is damaging. (1) However, one may say: "We have not to think only of the child. Let us think of the parents, the siblings and society." True, but we see frequently enough, that in an otherwise normal family this abnormal child can do well if there are no more than the usual tensions and if love dominates and understanding of the situation has been fostered by wise counsel by the family physician, the social worker, the public health nurse, or any other understanding person such as a parent of a subnormal child who has learned and matured from this experience. To quote from a paper on mongolism: (2) "Children with mongolism may be nice, cooperative, polite and quiet persons who fit quite well in a family group and present no problem in the home. In an environment of psychological tension, rejection and nervousness, such a child may be extremely destructive, aggressive, overactive and unmanageable, a real 'terror' at home, in school, and in a physician's office." Therefore, attempts should be made to investigate the possibility of a child staying with his parents and in the community. Let us not forget that the best hospital—private, city or state—whether concerned with the physically or mentally defective, is an abnormal social institution. It is not and cannot be our normal way of life even if we try to make the situation in hospitals as near to normal as possible. Even then we have to help the patient to fight back from institutionalization to normal society. If we can avoid hospitalization and the necessary process of de-institutionalization by not sending the child to a hospital in the first place, we have gained very much. And if we have to do it, let us do it as late as reasonably possible, thus giving the child a background of home and parental love and to the parents the satisfaction that they have done their best. Of course, we realize that guidance and under-

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standing of the situation will be necessary, that many problems will occur, and that heartaches cannot be avoided. But in many situations satisfactory results can be obtained.

If the family situation is inadequate—parental tension, broken home, difficult economic situation (too rich or too poor), other solutions will have to be sought. The next step would be a good foster home; and, if this fails, hospitalization in good private or state institution may be necessary.

What about the older child whose school and social adjustment has failed? Here the physician will ask himself: "To what school? To what society? Is the school or society (family) adequate for the needs of the child?" Since "sputnick" we read every day that we do not do right by giving too little opportunity and stimulation to our gifted children. I believe that our philosophy has to be that every child should have a chance to develop to its best capacity. We cannot afford to waste the talents of gifted children; but neither can we afford to waste the possible contribution to society of the subnormal who might, if properly trained and educated, be able to do a job which somebody else with higher intelligence may be unable to do as his ambition drives him to higher goals in life. We cannot afford to waste any life or potentiality, neither the genius nor the retarded nor the defective. Therefore, the family physician will think of his responsibility and look at his community and ask the following questions:

1. Do we have a special diagnostic clinic?
2. Do we have a pre-school training program for mentally retarded?
3. Do we have special classes for the mentally retarded—those who can learn academic subjects and those who at least can be trained to some better adjustment in society and some manual work?
4. Do we have a planned foster home program for the children who are in need of them?
5. Do we have the possibility of sound counsel and psychiatric advice for the patients and families?
6. Do we have sheltered workshops and other plans in the vocational rehabilitation field for this group?

If he finds that these facilities are available in his own or nearby community, he can say: "We have a good beginning of a program. Let us use it to its fullest extent." If he finds that these opportunities are not available, he and other responsible citizens should work to provide them.

Is this the final solution? Do we not need any institutions at all? Of course we do. It is estimated that approximately five million of our citizens are functioning on a subnormal level—a 3% population figure is usually given and only a small number of these persons are in an institution. Some who are there should not be there, or should never have been hospitalized. Others who live in the community may have profited from hospital care, treatment, and rehabilitation.

We have to decide which patient will be best taken care of in a hospital equipped to deal with this problem. The reason for this may be that the child cannot profit from a school, even if special classes for the retarded are available, either for the so-called "educable" who can absorb in a limited way some of the academic teaching and for the "trainable" who can learn to socialize, care for himself, and learn to do manual work even if the mastery of the "three R's" will be an unobtainable goal. Or, the family structure is deteriorated or tension is too great and a suitable foster home cannot be found. Or, there may be other sickness in the family-psychosis of the mother, alcoholism of the father, or severe disability of either parent. Or the family cannot accept emotionally the problem and psychiatrically oriented assistance is not available or does not succeed. Or the physical disability of the severely organically brain damaged patient makes the necessary care at home too costly or impossible. Or severe cranial malformation of an infant makes a discharge to the home from the hospital where it was born a too severe psychological trauma for the parents or the siblings. We arrive at the conclusion that this patient should be sent to the hospital.

Of course, these few examples have only illustrated but not covered the various possible indications and contra-indications to hospitalization or institutionalization. I have purposely omitted a consideration of the problem of juvenile or other delinquency associated with mental deficiency.

In discussing institutionalization, I will refer to the special problem for planning for admission to the Lynchburg Training School and Hospital as I am only familiar with this situation. It may seem to the reader that the plea for home and community care as first approach was done as a sort of self-defence to fight the increasing and dangerous overcrowding of this hospital. It may be that this has been the underlying cause although I do not think

so. The plea was based on our best present-day thinking and also made in the interest of the patient and society. Therefore, if I say a few words about the overcrowding of the institution this should be considered by the physician but should not deter him from giving advice as to hospitalization when this is really indicated.

The Lynchburg Training School and Hospital has a rated capacity of approximately 1,900 patients and has at the present time about 2,600 and a waiting list of about 500. The nursery has been closed as additional admissions would endanger the life and health of the patients at present in the nursery or those newly admitted. The present building and modernization program of the State, will, when completed in 1960 or 1961, provide space for 2,700 or 2,800 patients. This will be sufficient for relieving the present overcrowding and allow a small margin for increase of the present patient population. Increased rehabilitation efforts will assist in making more room for admissions by an increased discharge rate. Cooperation with other State agencies as the Division of Vocational Rehabilitation of the Department of Education and employers in our cities and communities will further this goal. However, the State of Virginia or any other state cannot win this race of providing sufficient hospital facilities for those who need them if the communities fail in their duties and consider state institutions as dumping ground for all of their problems thus avoiding their own responsibilities. The State Department of Education has been most helpful to communities in establishing special classes and at the time of writing of this article they have 167 classes in operation. There are 42 classes of "trainable" children and 125 for moderately retarded or the group to which we refer as "educable". Many, many more are needed and the good example of some of the cities and communities will stimulate, I am convinced, the others which lack these facilities.

Special technical-legal procedures are necessary for an admission to a state institution. On February 1st Lynchburg sent out information in a newsletter to the superintendents of departments of public welfare, to judges of the courts, and other interested agencies, outlining admission procedure, our discharge planning and the steps necessary in sterilization procedures as authorized by the statutes of Virginia. Those interested in a copy of this newsletter and subsequent issues are cordially invited to write to the Lynchburg Training School and Hospital for a copy of this first letter. Those interested can be placed on the mailing list for future issues. Perhaps some of the technical aspects of the procedures can be discussed in a future article.

Maybe the reader wonders why this article was written. Should we write "finis" to our institutions: What will be their use if the communities develop their resources to the fullest possible extent? Will the hospital for mental defectives and the school and rehabilitation facilities be a thing of the past? The Department of Mental Hospitals does not think so. Firstly, there will still be more patients who should come to institutions than our present and future planned capacity can accommodate: those from broken homes, from homes with tension or psychological problems caused by the patient, those needing more guidance and educational facilities than the community can provide, those from small rural communities which cannot provide special classes or guidance facilities, the severely brain-damaged and many others. But secondly and most important, the mission of an institution such as the Lynchburg Training School and Hospital is that of a training and research center for all professions vitally interested in this problem: education, social work, nursing, psychology and the medical specialties of pediatrics, physical medicine and rehabilitation, psychiatry and neurology. Training these and other specialties, investigating possible causes, clarifying the various patterns of the groups of mental retardation and the brain damaged, controlled studies of therapeutic and rehabilitation approaches and many other investigations can be best done in such a setting. Medical schools, city hospitals, and other hospitals do not replace the practicing physician in the community. Institutions for the mentally retarded will not replace the various community resources and the work of the physician dealing with the problem. The practicing physician does not make the medical school or city hospital obsolete nor do the community resources as outlined above, abolish the need for an institution such as the Lynchburg Training School and Hospital. All approaches to this problem are necessary.

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Pre-Paid Medical Care. . . .

Edited by
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Needed: All Hands

From information published in the 1958 *Argus Chart of Accident, Sickness and Hospitalization Insurance* it is easy to ascertain, for any one or all of the companies writing group health insurance, such 1957 annual experience factors as "claims incurred to premium earned" and "operating expenses incurred to premium written". Adding together these two 1957 ratios for the thirty companies which had the largest volume of group health insurance premium income produces combined ratios which exceed 100% in the case of nineteen companies out of the thirty. Of course the combined loss and expense ratios, not being true mathematical additions, do not reflect exactly the gains or losses from underwriting which the respective companies may have shown in their annual statements. Nonetheless, the fact that just about two out of three of the large companies have combined ratios exceeding 100% indicates the insurance industry is experiencing real trouble with the one main variable which affects its indemnity programs—utilization. Blue Cross-Blue Shield is not alone when suffering from the rather precipitous increase in the rate of usage of prepaid benefits.

Obviously health insurance premium rates, as well as Blue Cross-Blue Shield rates, must be adjusted to cover the over-all cost of benefits as influenced by the utilization of benefits. Because all are similarly affected by the same utilization trend, no one company—nor Blue Cross-Blue Shield—is apt to "price itself out of the market" as it increases rates to cover increased liabilities; that is, the company will not price itself out of the competitive market. However, when raising rates to levels which some people are unwilling to pay, all the companies—and Blue Cross-Blue Shield—are "losing business", and are thereby coming closer to pricing themselves completely out of existence. When a certain number of people, and it need not be a majority, come to the conclusion that voluntary prepayment is too expensive, their dissatisfaction will be expressed at the polls, and a compulsory prepayment system will be the result.

The situation is complicated by the fact that the public wants to prepay-in-full, or to come as close to doing so as possible; the most successful insurance programs are those with levels of indemnification that approach the value of Blue Cross-Blue Shield's service benefits. Reducing prepayment rates by limiting coverage to inadequate benefits, or imposing financial barriers to health care—"co-insurance" and "deductibles"—in an attempt to lessen utilization, would be as immediately disastrous as letting prepayment rates go beyond the public's willingness to pay. The public wants to eliminate its out-of-pocket expense at time of illness; if the voluntary prepayment mechanism is not sufficiently successful in doing so, the public will let compulsory prepayment have a try at it.

Voluntary prepayment is now sailing between Scylla and Charybdis; it is a situation calling for "all hands and the cook".

The call for "all hands" includes every doctor. American medicine has too great a stake in the future of voluntary prepayment to ignore its problems. When doctors first sponsored voluntary prepayment they not only created a bulwark against socialized medicine but they also identified themselves with programs to which the people of America have given a tremendous endorsement. Constant professional vigilance, cooperation, and leadership concerning these programs is the price of continued freedom in medicine. As John Philpot Curran warned the infant nation in 1790: "The condition upon which God hath given liberty to man is eternal vigilance; which condition if he break, servitude is at once the consequence of his crime and the punishment of his guilt."

Specifically what can doctors do? For one thing doctors—and perhaps only doctors—are in a position to educate the public about the "legitimate" reasons for increased utilization of prepaid benefits. Undoubtedly, the people will be more willing to pay the higher rates necessitated by increased utilization if they understand why utilization has increased and will continue to increase. The average person, through lack of knowledge, now believes the increase in utilization to have come about primarily, if not solely, as the result of more and more fraudulent or quasi-fraudulent usage of prepaid benefits. His

physician should take the initiative to explain to him the numerous factors involved.

Population changes, for one thing. We are rapidly approaching the point where the average family will have three children, as compared with an average of less than two children just a few years ago. Very soon an insured's prepayment charge for family coverage will have to reflect the fact that he has twenty-five percent more children under his policy or contract than he did ten years before—more utilization of family benefits accordingly. And the increased size of the family means also that there will be more births per prepayment subscriber.

At present one out of every twelve persons is over age 65. This ratio will increase to one out of every ten by 1975, and Blue Cross statistics show that the cost of hospitalization of persons 65 and over is from three to four times that for those under age 65. Increasing life expectancy will also increase hospital usage by those in the age bracket immediately below age 65. The Metropolitan Life Insurance Company learned that, during 1956, the age group 55-64 used 193 hospital days per 100 individuals insured, as compared with a hospital bed-usage rate of 64 days by the 35-44 age group—three times the utilization of the younger group.

In 1940, approximately twenty percent of the total labor force of the nation was employed on farms. Currently, only about ten percent is so employed, and by 1975, say the experts, the proportion will have been reduced to as low as six percent of the total labor force. That the urbanization trend will be an influence for further utilization of hospital care is evidenced by the significantly higher rate of usage of hospital care by urban dwellers over the farm population.

The impact of the working wife on the utilization of hospital care can be easily explained. Often there is no one at home to take care of the sick husband or child in over twenty-five percent of the 50 million families in this country. Household servants are disappearing rapidly as the salaries paid by industry beckon. The number of families with full-time help in the home has decreased between sixty and eighty percent since the start of World War II. Further, we are now in an era of the one-bedroom home and the utility apartment—there is no room at home in which to be sick—and it is, of course, much cheaper for the community as a whole to maintain a pool of sick rooms in a hospital than to construct dwellings that include sick rooms.

The level of education of the individual apparently has a good bit to do with the readiness with which people enter the hospital. In this regard, the schooling of all adults in the nation rose from an average of nine years in 1950 to an average of ten and a half years in 1957. During that same period the number of high school graduates in the population increased by thirty-one percent, and the number of college graduates by thirty-two percent. To meet the demands of industry and society for personnel with a higher level of education, the colleges and universities of the nation are gearing up to handle, by 1970, more than twice the present number of students. Apart from formal education, the press and television are giving the general public a medical and hospital sophistication—an awareness of the value of in-hospital care in case of illness.

The person who has received from his doctor an explanation of the medical and demographic reasons why utilization is increasing probably will be willing to prepay the rates necessary to cover that degree of utilization which can be explained; but he will still react negativistically, perhaps drastically, to the idea of having even a small amount of his prepayments wasted through misuse or injudicious use of benefits. To satisfy him on this score his doctor must be able to point to organized, efficient controls over misuse of prepaid benefits—to effectively operating committees of hospital staffs, for example.

State officials, the press, the man-in-the-street—anyone here in Virginia—now could raise several embarrassing questions. Do medical and demographic trends here in Virginia account fully for the increased usage of hospital-days per thousand Blue Cross members from an average of 1,044 during 1956 to an average of 1087 during 1957 (a four percent increase in just one year)—or is misuse of hospital-days involved? Are the people of Maryland so much more healthy than Virginians, or why is it during 1957 the Virginia Plans had to pay for twenty-six percent more days per thousand members than did the Maryland Plan? Do patients who are not insured receive inadequate care; or, if such is not the case, why do insured patients have, on the average, twice as many X-ray examinations and twice as many laboratory tests during a hospital stay? Do Blue Cross members come from indequate homes; if not, why do one out of four Virginia hospitals keep their Blue Cross patients, on the average, almost a full day longer than they keep patients who are paying directly out-of-pocket?

These are questions about medical care here in Virginia that only the doctors of Virginia can an-

swer. These questions pertain to the patients of Virginia doctors; patients whose hospitalization was arranged by Virginia doctors, whose diagnostic studies were ordered by Virginia doctors, whose dates of discharge were determined by Virginia doctors.

In the future—probably the not too distant future—if these questions are still germane, if the medical profession has abnegated its responsibility of controlling misuse of prepaid benefits, if uncontrolled utilization is the cause of further increases in voluntary prepayment rates, the people are going to conclude that the Government ought to have the power to do something about it. Their argument, of course, will be the short-sighted and erroneous argument that the Government can do the job more efficiently and less expensively, but this type of argument has already been successfully used to support all kinds of interference with economic freedom.

The prepayment approach to medical-economic problems has been firmly established and proven necessary. The idea of prepayment will never be abandoned, but whether the idea will continue to be implemented on a voluntary basis, or will be taken over and implemented by the Government on a compulsory basis, is in the hands of those who provide and regulate the use of prepaid services. "The condition upon which God hath given liberty to man is eternal vigilance."

Food Fads

The American Medical Association has announced plans for a concerted program to alert the public to the dangers of substituting "food fads" for sound nutrition.

Dr. F. J. L. Blasingame, executive vice president of the A.M.A., pointed out that millions of Americans are influenced by nutritional products of questionable merit. "We feel it is our duty to warn against abandoning the traditional 'three square meals a day' and the principles of sound nutrition for the pills and schemes of food faddists."

The U.S. Food and Drug Administration and the National Better Business Bureau are cooperating with the A.M.A. in this program.

F.D.A. Commissioner George P. Larrick, Washington, D.C., in commenting on the problem said, "Our food supply is unsurpassed in volume, variety, and nutritional value; our medical care is unexcelled. Yet food faddists and some promoters circulate false ideas about food and nutrition which can be dangerous to health."

The A.M.A.'s educational program will be conducted via television, motion pictures, public meetings, newspapers, and magazines. Four educational aids, for use in the campaigns, were shown at the A.M.A.'s annual Public Relations Institute.

One is a 28-minute motion picture produced in Hollywood for use on television and for showings to club, church, and school groups. Titled "The Medicine Man," the 16mm. black-and-white film exposes two types of nutritional "quacks"—the health food lecturer and the door-to-door food supplement salesman who makes unwarranted claims for his product.

A second aid in the campaign is a 20-foot exhibit designed for display at state and county fairs under the auspices of local medical societies. In addition to telling the facts about food supplements and health food lecturers, it will also expose weight reduction schemes and other nutritional "flim-flams."

Also previewed at the Public Relations Institute was a brochure, "Beware of Nutrition Nonsense," and an article which appeared in the September issue of the A.M.A.'s magazine, "Today's Health."

To underscore the need for an educational campaign against food faddism, Dr. Charles S. Davidson, Boston, Mass., chairman of the American Medical Association's Council on Foods and Nutrition, said: "Some Americans not only waste their money on food fads, but in many cases actually endanger their health. Federal agents have uncovered peddlers who claim their nutritional products will cure almost any disease.

"The greatest danger comes when sick people abandon accepted therapy to experiment with food fads or when they attempt to treat serious symptoms with nutritional products of unknown reliability instead of going to their family doctors for a checkup."

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Veterinary Public Health

For generations Veterinary Public Health has in actuality contributed to the welfare of the community as an entity, although it remained for recent generations to name it as such. The laboratory and research groups, including scientists from many fields and with many special interests, and individuals whose questioning and curiosity arose from the needs of humans, have indulged in the observation of and experimentation on animals in their efforts to reach a goal of human well-being. The advent of veterinary services into the field of public health is predicated on the premise that disease control and, in fact, all of Public Health is necessarily a cooperative effort on the part of many disciplines and that the highest ultimate achievement can only be reached through this cooperative effort. Indeed, the definition of Veterinary Public Health is set forth by the World Health Organization as "that field of activity which protects and advances human well-being by utilizing the combined knowledge and resources of all those concerned with human and animal health and their inter-relationships."

Since the end of World War II, approximately fifteen years ago, the incorporation of veterinary specialists in various capacities from the Federal administrative set up through the State to the local administration has been rapidly expanded. At the present about forty states in this country have included in their State Health Department administration a public health veterinarian, whose official capacity varies markedly according to each state's requirements. In some states a Division of Veterinary Public Health is utilized and the director of this division, a graduate veterinarian with postgraduate health training, may be charged with the supervision of meat and milk inspection (food hygiene of all kinds); epidemiological investigations; communicable disease control, especially in the area of diseases of nature which include around one hundred named disease entities capable of transmission from animals to man; health education through personal contact and group activities; research projects concerned with air pollution studies, radiological fallout and radiation health as it is affected by disease control methods; research in geriatrics and chronic diseases, as in helping to provide techniques and observations for human studies; higher level administrative duties, as the veterinarian is more completely utilized with his scientific background and philosophy of disease control.

In this State our Veterinary Public Health section is attached to the Bureau of Communicable Disease Control and the Public Health Veterinarian at this time is involved almost wholly with epidemiology and consultative and advisory planning in the control of diseases of nature. At the present a state rabies control program is the major consideration of this section, whose planning includes legal provisions within every county or city health department for compulsory immunization of the target dog population and proper control of stray and/or vicious animals; educational participation by this office as well as veterinary practitioners through local organizations and contact with individuals and groups; liaison between the state and local health departments and other official agencies, such as the Department of Agriculture, the Commission of Game and Inland Fisheries, the Virginia Veterinary Medical Association, etc.; and the advisory regulation of information disbursed by all agencies concerned with rabies control work so that uniform, accurate and sufficient facts reach the public.

Rabies in Virginia, as confirmed by laboratory diagnosis, still persists at a sufficiently high incidence rate to maintain Virginia in the top ten states in the country. The problem has been resolved, however, geographically, numerically, and according to species. In the period around 1952 some of the urbanized areas in the southeastern part of the state were seriously afflicted with this disease problem, the significance of which lay in the fact that human exposure was an eminent threat. The Health Department and other interested agencies took decisive action and instigated a statewide program of control under the direct supervision of one of the country's leading rabies experts, and laid the foundation for our present state rabies control program. Included in this planning was the establishment of the office of Public Health Veterinarian within the administrative organization at the state level. This full-

time employee has been charged with the fulfillment and elaboration of rabies control within the State Health Department. Since 1954 there have been no laboratory confirmed cases of rabies south and east of an arbitrary line running diagonally from Patrick County on the southern border of the State north to King George County. This absolution from rabies has been effected by a fundamental compulsory immunization of dogs and careful control of strays, vicious animals and wildlife vectors in which the offending virus may be perpetuated. It is the urgent aim of the rabies control program to attain in every county along the diagonal buffer strip across the state a legal means of providing an immunized dog population and a community free of strays and vicious animals.

A community's complacency based on the absence of known rabies cases, particularly where there is an organized preventive program in operation, is a subtly dangerous thing. Our problem although relegated primarily to our wildlife population remains a potential threat to our livestock economics, our peace of mind, our personal welfare and, in the extreme, our very lives. We shall continue our preventive medicine efforts through investigation, analysis and close cooperation with all those involved with us in this problem.

Monthly Report of Bureau of Communicable Disease Control

	Sept. 1958	Sept. 1957	Jan.-Sept. 1958	Jan.-Sept. 1957
Brucellosis	4	1	17	19
Diphtheria	0	2	14	14
Hepatitis	32	31	221	359
Measles	195	69	21366	4788
Miningococcal Infec.	1	2	71	54
Meningitis (Other)	46	50	200	366
Poliomyelitis	37	24	96	77
Rabies (In Animals)	9	19	221	255
Rocky Mt. Spotted Fever	7	1	32	29
Streptococcal Infec.	370	222	5493	5096
Tularemia	3	2	31	25
Typhoid	7	2	35	37

Hypo-Allergenic Cosmetics

Young women with acne can now wear makeup and not aggravate their skin disorder. They can use some of the special hypo-allergic cosmetics now on the market.

Foundation creams and lotions are useful camouflages for skin defects, yet standard brands invariably contain oil—the last thing which should be put on an oily skin.

The answer is a foundation without fatty materials, according to Mrs. Veronica Conley, secretary of the American Medical Association's Committee on Cosmetics.

Such a foundation also can contain the common drugs used to treat acne. Because they can be left on the skin day and night, this increases the effectiveness of medications, Mrs. Conley said in the October Today's Health, an A.M.A. publication.

Some 50 items includings creams, lotions, nail polishes, lipstick, hair preparations, and suntan products are now available in hypo-allergic form. Attractively packaged and available in a wide selection of fashionable colors and shades, they compare favorably in price with standard cosmetics.

In their simplest form, hypo-allergenic beauty aids may meet the need of the woman who has a slightly sensitive skin that shows vague symptoms of redness, rash or itching.

In their more complicated form, they may help women who are allergic to some particular ingredient, of regular cosmetics. One of the commonest troublemakers is bromo acid dye, used to give lipstick its indelibility. Another is sulfonamide resin, an adhesive ingredient found in all ordinary nail polishes. Hypo-allergenic polishes and lipsticks omit these substances.

For most women cosmetics are no problem, but for the minority with "exceptional skin" hypo-allergenic products are a blessing. They often make possible the use of cosmetics for women who otherwise would have to do without.

The Medical Society of Virginia . . . .

The AMA Public Relations Institute VIP Meeting

Like all meetings, this began with a registration and coffee hour. Because of advanced registration and thorough organizing, registering consumed very little time and allowed a lot of time for consuming coffee and coffee rolls and visiting the exhibits. The exhibits this year dealt primarily with what has and is being done to render greater Public Service. Throughout the entire program, stress and emphasis was on Public Service and not just Public Relations.

For years this program has pointed out means and projects for improving Public Relations. It is felt by those who are specialists in this field that like "the cannibal who went to the psychiatrist because he was fed up with people", the public is fed up with only Public Relations ideas. They want to see public service. This is undoubtedly the keynote of our PR Program because if we, the medical professions, render good public service, then our public relations must be good.

On the "kick off," Mr. Leo Brown, Director, Division of Communications, urged us to take inventory of ourselves and determine two things:

1. How far have we come
2. How far must we go still, in order to achieve our ultimate goal.

He stressed three clues in regard to the letters V.I.P.

1. Vision. There can be no tunnel vision in medicine. We must see all that lies before us, not just a narrow segment directly ahead. We must convince the public that we are a part of our community and not apart from it.

2. Valor. We should have the courage of our convictions. We cannot be respected by others unless we have the valor to defend our beliefs. For too long, we have lived in an age of Social, Political and Economic adjustment. We have developed a philosophy of "going along together." We must wake up before it is too late, say "to h____ with it" and then just accept what is handed to us, without our having worked for our ideas or defended our beliefs.

3. Vitality. Select one or two fields of Public Service and go all out to render the greatest service. Put enthusiasm in our projects and solicit 100% participation by our members.

Hugh W. Brenneman, Public Relations Counsel, Michigan State Medical Society, moderated an "Experts" Panel. On this panel there appeared four very prominent men, each one a specialist in a different field. Fields covered were: Health Insurance, Labor, Politics and Management.

Mr. Morton Miller, Second Vice President, Equitable Life Assurance Company of New York, discussed "The Voluntary Health Insurance Problem", touching on such important phases as the insurance needs of the geriatrics patient, allowing persons to continue their protection after retirement, and the rising cost of health care and health insurance and here we heard the same old "pitch" about some of the increased cost being unnecessary and being brought on because of the abuse of hospital usage, as well as the ineffectual use of facilities. Yes, in a way it is ineffectual.

Mr. Leo Perlis, Director of Community Services Activities, AFL-CIO of New York, gave us Labors vision on the problems of medical care. He stressed the difference between practice of medicine and provision of medical care. He felt there was nothing wrong in the practice of medicine but in the provision of medical care which provided not enough coverage or benefits. He was convinced that we could make the voluntary plan work if we kept our minds open to all possibilities, and that the important issue was not "How to Practice Medicine" but how to provide medical care. He urged greater participation by physicians in voluntary health insurance plans. He pictured the whole union as a community organization interested in the good of the total community, and the laborer as a citizen, not just a union member.

He urged experimentation in the field of providing medical care, reminding us that all strides in medicine have been accomplished through experimentation. So far, according to him, experiments have been confined to the laboratory, now we should have constant experimentation in hospital, home, office, dentist and psychiatric care.

The Honorable Thomas B Curtis, U. S. House of Representatives, 2nd District, Webster Groves, Missouri, discussed three basic economic changes and their causes.

1. Suburbanization, which was fostered by electricity and modern transportation.

2. Economy of plenty.
3. Cost of living index.

He discussed, at some length, the cost of living index and gave some very pertinent points and his impressions. The increased quality and standard of living is the basis for the overall increase in cost of living. There is no doubt that our living standard is much higher than it was 20 or even 10 years ago, and it is impossible for us to have our modern conveniences and necessities, to say nothing of our luxuries, without having to pay for them. We don't complain so much about the increased cost of living because a large percentage of these expenditures are for pleasures and non essentials, but when we have to pay a proportionate increase for hospital and medical and surgical care, we howl and yet the quality of these services, including drugs, has only kept pace with our living standards. In considering the cost of living, we cannot overlook the increased cost from a geriatrics standpoint, because the problem of the aged is an economic one. It is up to us to investigate and solve the problem, or longevity will become a bane instead of a boon.

His remarks on politics were both enlightening and amusing. He felt that we were approaching, if not already entering, the end of the two party system, and praised both the Senate and the House for their honest debate.

His final remarks dealt with "The Congressional Record and Lobbyist". According to him, what we read in the Congressional Record is not what a particular person said but what he *wished* he had said. It represents a member's speech that was delivered, then edited, revised and deleted as seemed most expedient. He defended lobbyists, as being honorable—that is the majority of them, admitting that there were a few of the other variety—and concluded with his impression that they render an overall honorable service.

The last member of the specialists panel was Mr. Jules W. Lederer, President, Autopoint Company. He is only 40 years of age but he spoke as though he had 40 years of business experience. He stressed two words in providing better and adequate Public Service.

1. LISTEN. Learn what the other person is saying and wants.

2. COMMUNICATE. Tell him what you have done, what you can do and why.

He summed up the present business situation as he sees it, and predicted the depression to last 18 more months, with a slow road of recovery. He blames the depression on the increased cost of production in a declining market. His statement "The cost of living goes up, profits decline and then labor asks for increased salaries" produced some chuckles and a reply from Mr. Perlis. He felt that the basic fears of economic welfare manifest themselves in psychosis and psychosomatic conditions in people and thereby increase the need for medical and hospital care. He urged us (Doctors) to do a better, more constant selling job of ourselves and our product—medical care of the public. He predicted a change, manifested by some form of socialized medicine and stressed the need for a good Public Relations job of Public Service on the public.

He was inclined to think that labor did not appreciate the hospital, medical and surgical coverage policies given them by management and "paid for out of management's pocket".

At this point, Mr. Perlis took the floor and stated that labor not management paid these insurance premiums, because in wage negotiations the cost of these policies was considered and the yearly wage was decreased by the cost of such policies.

It would have been interesting for some one to have called for a survey, showing what percentage of personnel purchase hospital, medical and surgical coverage and how much coverage was purchased, in an instance in which labor was paid more and no hospital, medical or surgical coverage provided by management.

Following lunch, Dr. B. G. Gross presented an interesting discussion on the familiar phrase "Nothing is Wrong With Me, Everybody Else is Crazy."

During the afternoon, we were coached on Communications Techniques by such teachers as Dale O'Brien, President, Chicago Chapter, Public Relations Society of America; Wendell Johnson, Ph.D., Professor of Speech Pathology and Psychology, University of Iowa.

James Reed, Editor A.M.A. News, discussed the newest publication and presented everyone with a copy of The A.M.A. News. It is to be published twice a month, beginning September 22nd. He stated that the basic purpose of The News is to Inform, Stimulate and Challenge. It will be complete with editorials, cartoons, hobby, sports, travel and art. It will be nontechnical. The advertisements will be limited primarily to practical aids in problems of the practice of medicine and to help the community. Editor Reed solicits the cooperation of everyone with news, articles, and comments.

The Social Hour was enjoyed by all. In addition

to refreshments, entertainment was provided by Dr. James T. Brown and his friends from Springfield, Missouri, in the form of a Musical Skit titled "Musical (Medical) Hit Parade". A transcription has been ordered of this presentation, and will be available to any society which wishes it by merely contacting Bob Howard, our Executive Secretary.

Thursday morning, covered new Public Relations Projects such as:

1. The handling of staphylococcus infection in hospitals.

2. Cooperate with the press and give them the doctors side of the program.

3. Social service for older patients.

4. Improved sanitation standards for grocery stores and meat markets.

5. Athletic Program. Cooperating between doctors and coaching staff of school recommending more insurance coverage for students.

6. Accidental Poisoning. Establishing a Central Poison Control and Information Center.

7. Establishing a medium—not minimum fee schedule.

8. Join and cooperate with the Junior Chamber of Commerce in your community.

Mr. Howard and I sat back and listened to all this and I expect we had a very smug expression on our faces because to us we felt that The Medical Society of Virginia was already well ahead on many of these projects that were being recommended that morning. Certainly, much is being done in various communities to combat a staphylococcus infection in hospitals. We feel that our Press-Radio Code of Ethics is certainly working excellent in many localities. Virginia is well in the front with regard to providing studies and services for their older patients. We feel that most communities have a very satisfactory Health Officer, who looks into the sanitation standards of our foods. In regard to the athletic program in many communities, the Medical Society provides free medical examinations for all students in competitive sports and lots of times we render service either for free or at a nominal charge in those cases that are not covered adequately with insurance. Our Central Poison Control Center in Richmond has certainly done a wonderful job and is to be commended for its excellent work. I think there is very little disturbance in our midst concerning a meeting of minimum fee schedules and I feel sure that our local societies communicate not only with the Junior Chamber of Commerce but with all other civic clubs in any of their projects when called upon.

The final portion of the program dealt with Food Faddism and Quackery. This panel was really loaded. For power we had Warren Whyte, Attorney Law Division of the A.M.A., Kenneth Milstead, Ph.D., Director of the Bureau of Enforcement, Food and Drug Administration, Washington, D.C., the one and only Oliver Field, Director of the Bureau of Investigation. For pulchritude, we heard Miss Maye Russ, Director of Drug and Cosmetics Division of National Better Business Bureau. All of the speakers were tops, but the old adage of saving the best for last was never truer than on this panel, because Miss Russ capped the climax.

After Miss Russ, we witnessed the Premiere showing of "The Medicine Man", a documented film portraying the "sales pitch" of charlatans, who make unwarranted claims for special diets and supplements. The characters are Hollywood celebrities. These films are available for state and county Society use and it is hoped that they will be used extensively.

The luncheon was excellent and so were Professor Hillier Krieghbaum and Robert D. Potter who shared the after lunch spotlight discussing "Are They Listening".

Note: I feel that I have very inadequately given you an abbreviated account of the 1958 PR Meeting. It is just like trying to describe one of the famous Barnum & Bailey—3 Ring Circus. It can't be done and so for a vacation that is entertaining and educational, I urge as many of you as possible, please plan to attend the 1959 PR Conference.

John Wyatt Davis, Jr., M.D., *Chairman*
Public Relations Committee

Social Security Disability Program.

In 1954 and 1956 Congress amended the Social Security law to protect the benefits of persons who become disabled to the extend that they cannot engage in gainful employment.

In carrying out the provisions of the amended Act the medical profession, of necessity, becomes very much involved.

The article which follows was prepared by the Social Security people for the purpose of clarifying the doctor's role in the administration of the amended Act.

Our State Rehabilitation Service is made responsible for assembling data necessary for evaluation of the disability of applicants for these benefits. As

Chairman of the Medical Advisory Committee for the State Rehabilitation Service, I submit the article for publication in the hope that it may help doctors get a better understanding of the law and the role of the doctor in protecting the interests of the applicant and of the taxpayer as well.

Roy M. Hoover, M.D.

The Physician's Role in the Social Security Disability Program

Doctors, hospitals, institutions, and agencies who have contact with disabled people are frequently asked these days to fill out medical reports in connection with claims under the disability provisions of the social security law. Under these provisions, disabled workers 50 to 65 years of age, and the disabled dependent sons and daughters of retired or deceased workers, may receive monthly disability payments. Disabled workers under age 50 may have their social security records "frozen". This protects the future benefit rights of the disabled worker and his family.

To qualify under these disability provisions, a person must be unable to engage in any substantial gainful activity by reason of a medically determinable physical or mental impairment which can be expected to result in death or to be of long-continued and indefinite duration. A disabled worker must, in addition, have social security credits for work in at least 5 out of the 10 years before he became disabled, including a year and a half out of the 3 years before his disability began. A disabled child must be both unmarried and dependent, and must have become disabled before his or her 18th birthday.

Applications under the social security disability provisions are taken by the more than 570 social security district offices, located in communities all over the Nation. The social security district office gives the disabled applicant information about his rights, helps him to fill out his application, and to get the proofs and documents he may need to support that application. Under the law, the disabled person is responsible for furnishing, at his own expense, the evidence to show that he is "disabled" within the meaning of the social security law.

His social security district office gives him one or more copies of a medical report form on which this evidence can be supplied. He is asked to take or mail this form to his attending physician or to a hospital, institution, public or private agency where he has been treated for his disabling condition. This report form, designed as a guide for the reporting physician, lists the ind of medical facts essential for the determination of "disability". However, the reporting doctor is not required to use it; if he prefers, he may make his report in the form of a narrative summary or he may submit photocopies of the pertinent medical records. The completed reports are to be returned by mail to the social security district office.

By providing a full and objective clinical picture of his patient, the reporting doctor fulfills his responsibility to his patient and, incidentally, expedites the decision. To be of maximum use for the evaluation of a patient's capacity for work, the report should include a history of the impairment, the symptomatology, clinical findings and diagnosis. Obviously, the reporting physician has an important role in the operation of the social security disability provisions. He is not, however, asked to decide the issue of "disability". The determination as to whether a patient is "disabled" must be made within the scope of the social security law; often it is based on evidence from more than one medical source. Also the determination must take into account factors which are not purely medical factors such as education, training and work experience.

Some doctors feel that they should be reimbursed by the Government for the cost of preparing the initial medical reports on their patients, and it is, of course quite within their prerogative to charge the patient a fee for that service. However, under the law, the Social Security Administration cannot pay that fee; that is the individual's responsibility.

Often doctors are perturbed when asked to complete medical reports for individuals whom they may not have seen for years. In these cases, however, the physician is not expected to describe the present condition of the patient, but his medical condition is of the time he made his last examination. Although the social security disability provisions were made applicable to persons whose disabilities may have begun as far back as 1941, all those with long-standing disabilities must apply before July 1, 1958. After June 1958, therefore, this problem should be much relieved.

After the applicant has filed his claim under the disability provisions, and furnished the supporting evidence, his case is forwarded by his social security district office to an agency of his State—usually the State vocational rehabilitation agency.

The evaluation of disability is made by a "review team" in the State agency. There are at least two professional people on each team. One of the two

is a doctor of medicine (often a practicing physician who serves with the State agency on a part-time basis); the other is trained in evaluating the personal and vocational aspects of disability. The team must decide whether the applicant is sufficiently disabled according to the BOASI standards to prevent him from engaging in any substantial gainful activity within the foreseeable future. To evaluate the effect of impairment on the individual's ability to work requires the kind of medical evidence that confirms the diagnosis and measures remaining functional capacities of mind and body. By furnishing complete and objective evidence, the reporting physician makes it unnecessary for the reviewing physician to "write back" for additional clinical or laboratory data.

When the medical evidence initially submitted indicates a reasonable likelihood that the applicant is disabled, but more precise clinical or laboratory findings are needed to arrive at a sound decision, or to resolve conflicts in the evidence, a consultative examination (usually at the specialist level) may be required to obtain additional information. When such consultative examinations are found necessary, payment may be made in accordance with the established examination fee schedule of the State rehabilitation agency.

Evaluation of Disability

The central purpose of disability evaluation is to determine remaining mental and physical capacities. A realistic evaluation of disability must be based on clinical and laboratory tests of the individual's ability to meet the metabolic demands of activity, to reason, to perceive, and to perform certain basic activities such as sitting, standing, bending and walking. When incapacity results from severe impairment of one or more such functions, it is essential to establish not only the fact that functional impairment exists, but also its extent.

A brief discussion of disability from heart disease may serve to illustrate the kind of evidence needed to measure the patient's remaining functional capacity, after appropriate therapy. Most frequently, impairments of the circulatory system produce loss of bodily function by reduction of cardiac reserve, or interference with peripheral vascular circulation. As a result the circulatory apparatus cannot meet effectively the metabolic demands placed upon it. The diagnosis of the condition usually reflects whether the impairment is caused by valvular disease, myocardial damage or vascular pathology.

Cardiac size by x-ray or physical and EKG findings furnish objective proof of cardiac pathology. The amount of dyspnea or angina described in terms of the number of steps that can be mounted or distance in feet or blocks that the patient can walk is highly significant to evaluation of the degree of loss of function. The presence or absence of cardiac edema and response to therapy are also indicative of severity of cardiovascular impairments. The status of the pulse in the peripheral vessels may provide gross clinical evidence of impaired circulation of the extremities.

Impairments of the cardiovascular system may manifest themselves with dramatic suddenness, e.g., myocardial infarction, obstruction of vessels in peripheral or central nervous system circulation, lungs and other visceral organs. The initial clinical manifestations are severe and the prognosis dubious. With survival from the acute stage, and appropriate therapy, substantial improvement can be expected over a period of time. A realistic evaluation of remaining function should be made after the convalescent period. Hence, the clinical and laboratory findings after maximum improvement from treatment are particularly valuable in making a determination of remaining cardiac, brain or other function. (Note that a "waiting period", is prescribed by law, i.e., the first monthly disability insurance benefit cannot be paid until the seventh month after the onset of the disability.) A description of the acute attack helps confirm the diagnosis and should therefore be included in the report.

Loss of function is evaluated on the basis of clinical and laboratory findings after maximum benefit from treatment. Clinical information concerning nature and response to treatment furnishes information on stability of functional capacity, i.e., a history of periodic decompensated heart disease, in spite of treatment, would indicate a comparatively severe condition.

More complicated tests of vascular function may be required in certain cases, e.g., arteriography. The reporting physician should not be concerned because he may not have equipment to perform these tests. A carefully performed exercise tolerance test (if not medically contraindicated) will almost always provide the clinical evidence needed to evaluate the degree of remaining function.

Conclusion

In developing evaluation guides for the use of State agency and its own technical and professional personnel, the Social Security Administration has had the continuing cooperation of a Medical Ad-

visory Committee appointed by Commissioner Schottland, in February 1955. The Committee is composed of recognized specialists associated with medical and allied professions in various fields outside Government, such as general practice, research, medical education, industry and labor.

The American Medical Association has cooperated with the Social Security Administration by informing its members about the medical aspects of the disability program, especially the preparation of medical reports. On June 1, 1957, the Journal of the American Medical Association carried a comprehensive report on the administration and organization of the disability provisions. Regulations on the meaning of disability appeared in the September 28, 1957, issue.

Sick Absence from Work

Work absence due to illness may cost American industry as much as $10 billion a year.

No one knows, however, exactly how much time is lost by workers because there is no uniformity in keeping records and defining absence.

A start toward solving the problems of uniform definitions and records has been made this year by the American Medical Association through its Committee on Medical Care of Industrial Workers.

The committee has just issued a preliminary guide for measuring work absence due to illness and injury. It contains various definitions and formulas which the committee hopes will serve as a foundation for the uniform collection of sickness absence statistics by management.

The guide is a preliminary one, which eventually will be revised on the basis of suggestions from companies and physicians using it.

According to the guide's foreword, the use of uniform definitions and measurements will insure comparability of sick absence records within a given industry from time to time, as well as between industries.

Its use may help bring about "a clearer recognition of sick absence and a more accurate evaluation of its real impact upon industry and the employed population."

Among the guide's recommendations are:

—That a sick or injured employee absent from work be listed as on sick absence, not on "leave without pay" or "administrative leave," especially after the absence has exceeded a specified number of days.

—That sick absence be classified according to its origin—occupational or non-occupational.

—That duration of absence be based on calendar days rather than on work or "scheduled" days. This is in line with the practice used for sickness disability benefit payments and in sickness surveys among the general population.

—That medical terminology for recording diagnosis be based on "The Standard Nomenclature of Diseases and Operations," a book which lists accepted terms for diseases and operations. Future revisions of the guide will contain a recommended nomenclature.

—That occupational categories be set up on a specific basis, with the major categories being managerial and supervisory; clerical and sales; skilled; and semi-skilled and unskilled.

The Committee on Medical Care for Industrial Workers is a joint committee of the A.M.A. Councils on Industrial Health and on Medical Service. Its chairman is Dr. Frank J. Holroyd, Princeton, W. Va. Copies of the 11-page guide may be obtained from either of the A.M.A. councils.

Current Currents

SPECIAL REPORT ON ACTIONS OF THE HOUSE OF DELEGATES OF THE MEDICAL SOCIETY OF VIRGINIA

THE NEW PRESIDENT of The Medical Society of Virginia is Dr. Walter P. Adams, Norfolk. The President-Elect is Dr. Allen Barker, Roanoke and the First Vice-President Dr. Guy W. Horsley, Richmond. Elected as Second Vice-President is Dr. James Peery, Cedar Bluff, and Third Vice-President, Dr. McLemore Birdsong, Charlottesville.

SOCIAL SECURITY was the subject of a resolution which provoked spirited debate. The resolution would have approved the extension of social security coverage to the medical profession and directed that Virginia's Delegates to the American Medical Association introduce a similar resolution. The House, however, voted to accept the Reference Committee's recommendation that the resolution not be approved.

A MAJOR HOSPITAL INSURANCE program was approved and the membership will soon be furnished full details. The program will provide a choice of three deductible plans—all of them featuring $10,000 limits. Approved also was a business overhead expense plan which will be made available to the membership in the very near future.

TUBERCULOSIS was recognized as still being a serious public health problem in Virginia and a continuation of chest x-ray surveys was endorsed in accordance with recommendations of the State Health Commissioner. Special emphasis was placed on the older population, on those who have not had chest x-rays in recent years and all special smaller groups with recognized high incidence of tuberculosis.

THE INCREASING DIFFICULTY of continuing resident training in community hospitals was considered and the President was directed to have the problem studied by a special committee. This same committee would study the problems relating to the licensing of physicians in Virginia and make such recommendations as it believes advisable.

A CLOSER BOND BETWEEN LAWYERS AND PHYSICIANS was brought about when the House adopted "Standards of Principles Governing Lawyers and Physicians". It should be mentioned that these "Standards" were unanimously adopted by the Virginia State Bar during its annual meeting earlier in the year.

POLIOMYELITIS VACCINE was recommended for all persons from the age of 3 months to 40 years and the Society was directed to encourage all in that age group to receive the recommended three injections.

APPROVAL WAS GIVEN to the "Principles and Policies" recommended by a special committee. In accepting the committee's recommendations, the House in effect agreed that the survival of the medical profession as a group of dedicated individuals, free to serve without limitation except as imposed by available scientific knowledge and art of application, depends completely upon the adherence and conformance of the medical profession to basic and fundamental principles of ethics.

THE BY-LAWS WERE AMENDED in such manner as to permit those AMA Delegates appointed by the President in order to fill vacancies resulting from an increase in the number of Delegates authorized, to serve until the end of that calendar year. This amendment permits the provisions of Article VII, Section 4, to conform with similar provisions of the American Medical Association.

THE AMERICAN MEDICAL EDUCATION FOUNDATION was mentioned in a resolution calling for closer cooperation between the State AMEF Committee and local AMEF chairmen. Members of the House were requested to contact local societies in their areas and urge them to appoint local chairmen as soon as possible.

THE PASSAGE OF A SECOND INJURY LAW was again urged by the House. The matter is currently being studied by a special committee of the Virginia Advisory Legislative Council.

GENERAL PRACTITIONER OF THE YEAR is Dr. T. C. Sutherland, Haysi.

THE 1959 ANNUAL MEETING will be held at the Hotel Roanoke from October 4-7. The House accepted an invitation from the Norfolk County Medical Society to hold its 1960 Meeting in that area. Received also was an invitation to meet in Washington in 1961. Council was directed to place the 1961 Meeting on its next agenda.

DR. VINCENT W. ARCHER, Charlottesville, was re-elected as a Delegate to the American Medical Association and Dr. Malcolm H. Harris, West Point, was elected as his alternate. Elected to the Council were Dr. Byrd S. Leavell, Charlottesville, and Dr. Richard E. Palmer, Alexandria.

* * * *

This summary covers only a few of the important subjects considered by the House of Delegates. Please read the complete minutes in the next issue of the Virginia Medical Monthly.

Miscellaneous . . .

Principles of Medical Ethics

This is the last of the series of "Principles of Medical Ethics", the first appearing in the February issue. Each section has been reviewed, accompanied by a detailed explanation from the Judicial Council of the American Medical Association.

SECTION 10

The honored ideals of the medical profession imply that the responsibilities of the physician extend not only to the individual, but also to society where these responsibilities deserve his interest and participation in activities which have the purpose of improving both the health and the well-being of the individual and the community.

TRADITIONAL CONCEPTS INCLUDED WITHIN SECTION 10

The Judicial Council is of the opinion that Section 10 of the Principles of Medical Ethics, 1957, embraces the spirit and intent of several sections of the 1955 edition of the Principles, including Chapter I, Section 5 (The Relationship of the Physician to Media of Public Information); Chapter VIII, Section 1 (Physicians as Citizens); Chapter VIII, Section 2 (Public Health). These sections are reproduced below as guides in the interpretation of Section 10.

Chapter I, Section 5 (The Relationship of The Physician to Media of Public Information) 1955 edition of the Principles of Medical Ethics:

> Many people, literate and well educated, do not possess a special knowledge of medicine. Medical books and journals are not always easily accessible or readily understandable.
>
> The medical profession considers it ethical for a physician to meet the request of a component or constitutent medical society to write, act or speak for general readers or audiences. On the other hand, it may often happen that the representatives of popular news media are the first to perceive the adaptability of medical material for presentation to the public. In such a situation the physician may be asked to release to the public some information, exhibit, drawing or photograph. Refusal to release this material may be considered a refusal to perform a public service, yet compliance may bring the charge of self-seeking or solicitation.
>
> An ethical physician may provide appropriate information regarding important medical and public health matters which have been discussed during open medical meetings or in technical papers which have been published and he may reveal information regarding a patient's physical condition if the patient gives his permission, but he should seek the guidance of appropriate officials and designated spokesmen of component or constituent medical societies. Spokesmen should be empowered to give prompt and authoritative replies and a list should be issued which identifies them and discloses the manner in which they may be reached. These provisions are made with full knowledge that the primary responsibility of the physician is the welfare of his patient but proper observation of these ethical provisions by the physician concerned should protect him from any charge of self-aggrandizement.
>
> Scientific articles written concerning hospitals, clinics or laboratories which portray clinical facts and technics and which display appropriate illustrations may well have the commendable effect of inspiring public confidence in the procedure described. Articles should be prepared authoritatively and should utilize information supplied by the physician or physicians in charge with the sanction of appropriate associates.
>
> When any sort of medical information is released to the public, the promise of radical cures or the boasting of cures, or of extraordinary skill or success is unethical.
>
> An institution may use means, approved by the medical profession in its own locality, to inform the public of its address and the special class, if any, of patients accommodated.

Chapter VIII, Section 1 (Physicians as Citizens) 1955 edition of the Principles of Medical Ethics:

> Physicians, as good citizens, possessed of special training, should advise concerning the health of the community wherein they dwell. They should bear their part in enforcing the laws of the community and in sustaining the institutions that advance the interests of humanity. They should cooperate especially with the proper au-

thorities in the administration of sanitary laws and regulations.

Chapter VIII, Section 2 (Public Health) 1955 edition of the Principles of Medical Ethics:

> Physicians, especially those engaged in public health work, should enlighten the public concerning quarantine regulations and measures for the prevention of epidemic and communicable diseases. At all times the physician should notify the constituted public health authorities of every case of communicable disease under his care, in accordance with the laws, rules, and regulations of the health authorities. When an epidemic prevails, a physician must continue his labors without regard to the risk to his own health.

ANNOTATIONS to SECTION 10

Opinions and Reports of the Judicial Council

The following are excerpts from Reports and Opinions of the Judicial Council which are applicable in interpreting Section 10.

Advertising and The Daily Press

The Principles of Ethics of the AMA define clearly the methods which are objectionable for physicians to use to bring themselves into the public notice in their endeavor to gain a livelihood. They state clearly the methods by which a man may rise by honorable endeavor to the fame of a well-earned reputation, and suggest the different methods by which a man may gain unsavory notoriety. The standards of the medical profession have always demanded that physicians shall not exploit their ability or achievements to the laity. The medical profession condemns such advertising as quackery. The refraining from or the employment of advertising in the clearly defined difference between a reputatable physician and a quack—the physician, one who quietly, through his professional work and attainments seeks by daily honorable dealing to spread the truth among his patients; the quack, one who endeavors to obtain his livelihood by playing on the credulity of the ignorant and the timid, imposing on the public statements known to be false, stopping at nothing in his effort to enhance his notoriety or fill his pocket.

The public is eager to hear and learn all it can of the most recent advances in the cure of diseases that so far have baffled the efforts of men to cure, it is eager to hear of the brilliant operations by which men have seemingly been saved from certain destruction and brought back to useful existence. It is anxious to learn and put in practice the best methods of public hygiene and preventive medicine. The daily press has correctly considered such subjects as news, as that is what interests its daily readers, but the medical profession has been placed at a disadvantage. The members of the profession who value the kind of reputation which they may bear before the public and from whom the most accurate information could be obtained, have been forced to see the most garbled statements published as medical facts, or have been refused opportunities to have the truth published unless they were willing to put themselves in the false position of self-exploitation. Certain other members of the profession, however, with a very wide-awake commercial spirit, have quickly seen the means by which they may appear in the press as doing extraordinary things above their fellows, and have eagerly seized on the opportunity, to have their picture, their honors and their doings put in the public press. While this may not be quackery it must be acknowledged to be advertising. It is frequently difficult to decide where one ends and the other begins. Certain newspapers have heralded this stepping over the limits of the strict adherence of the profession to its non-advertising principles as something much to be desired. They seemingly fail to understand and appreciate that if the barriers which the medical profession has held up, and still holds up are broken down, quackery will become more and more rampant, and although the ease with which the press will obtain the sensations it desires will increase, the accuracy and the truth and the value of the news which they so eagerly seek will soon be ruined.

To all questions there are two sides and we must realize that if the AMA endeavors to arouse in the public an interest in medical matters and increase their knowledge of public health and hygiene with this increased knowledge will come a demand for more knowledge concerning the various diseases which may be acquired by any individual. The daily press has a right to publish that which is of interest to its readers; hence it has a right to a knowledge of medical matters that shall be accurate and given by honorable men. On the other hand there is every reason why the medical profession shall keep up its barriers against the self advertising of individuals for selfish purposes and no adequate reason why these barriers should be let down.

The Judicial Council therefore recommends to the

House of Delegates the following resolution: RESOLVED it is the sense of the House of Delegates of the AMA that each county society should constitute a publicity committee whose duties shall be to give to the daily press accurate information on all medical matters of interest to the public, that this shall be freely given without the mentioning of names or from whence the information comes, and that this committee shall act in an advisory capacity to all physicians of its society in questions relating to publications other than in the medical press. (*1914 Report*). [The resolution was adopted by the House of Delegates].

MEDICAL PUBLIC RELATIONS

In the ever-expanding field of medical public relations, no single phase has developed more than that which leads to the publication in national lay magazines and newspapers of stories of research or surgery. Such articles, where authoritatively prepared, usually tend to add to public confidence in the procedure described. The members of the Judicial Council believe that public confidence would be greatly enhanced, if a footnote printed with the article set forth the information that the article as written had the approval of the county or state, or both, medical societies. (*1952 Report*).

USE OF PHYSICIANS NAME IN CONNECTION WITH CIVIC ENTERPRISES

The Judicial Council, at a recent meeting, approved the following comments expressed by Dr. George F. Lull, Secretary of the Association:

"I believe it is an excellent thing for physicians to take part in civic enterprises. I think we have gone the other way and held ourselves aloof so long that we are not considered part of the community in many places. It is my personal opinion that our public relations can be improved by each individual physician's activities, since the people who come in contact with him usually judge all physicians by his standards."

The Judicial Council does not believe that the use of a physician's name in connection with a civic project should, in itself, be considered contrary to the Principles of Medical Ethics. (*JAMA, March 30, 1957*)

Nutrition and a State Medical Society

THE ultimate goal of all research and clinical investigation in nutrition is the improvement of the health of the people. To this end several progressive state medical societies have established programs which vary in scope and objectives but which have as their fundamental philosophy the "practical application" of our newer knowledge of nutrition.

One of the leading examples of such a progressive viewpoint may be found in the report of the Commission on Nutrition of the Medical Society of Pennsylvania (*Pennsylvania M. J.* 60:1113, 1957). The Commission's report may well be studied by appropriate commissions of other state medical societies for it represents an admirable example of what can and should be done.

In brief, the Commission has had two objectives: (1) The stimulation of interest in clinical nutrition at state and county levels; and (2) the dissemination of factual information on nutrition to both practicing physicians and the laity.

Among the numerous accomplishments of the Committee are the following:

A number of editorials on various aspects of applied nutrition appeared in the state medical journal.

Three exhibits were presented at the annual sessions of the state medical society. These dealt with obesity, electrolytes, and salt free diets.

A Coordinating Committee was established with representatives from city, state, and health medical societies, dental societies, state nurse organizations, etc. This Committee undertook a survey of the extent of nutritional training in hospitals. It was learned, not unexpectedly, that most hospitals, offer little or no training in nutrition to interns and residents. The great majority of institutions, however, expressed a desire for a manual on standard therapeutic diets for both reference and teaching purposes. As a result, therefore, the Coordinating Committee prepared a manual of standard therapeutic diets which apparently has met with considerable enthusiasm state and nationwide. Copies of the manual have been distributed free of charge to senior medical students of the six medical schools in Pennsylvania.

As part of an education program, the State Nutrition Commission organized various symposia. These were held at State Medical Society meetings, and in cooperation with the National Vitamin Foundation, and with the Philadelphia County Medical Society.

The Commission has also urged the establishment of nutrition clinics throughout the state and supported a pioneering nutrition clinic now in operation at the Philadelphia General Hospital.

In cooperation with the Dietetic Association, a program will be prepared for the laity.

The Commission cooperated with the Pennsylvania

Heart Association in the preparation of a manual on salt-free diets for free distribution.

The Commission also prepared a program of vitamin and other nutritional supplementation for patients under state public assistance. This doubtless will save the taxpayer a considerable amount of money.

The writer has had an opportunity to see a proposal for the establishment of a Division of Nutrition within the Department of Public Health of the City of Philadelphia. Because it is felt that this may be of interest to some of our readers, the following is a brief summary of this proposal.

The purposes of such a Division of Nutrition within a City Department of Public Health are (1) the promotion of better public health through research and special clinics; (2) the prevention of diseases arising from public ignorance of this field; and (3) direct participation in programs both in prenatal clinics, maternal nutrition studies, and school nutrition projects; and finally (4) rehabilitation of those who are in medical need from the public health standpoint, such as obesity, nutritional anemia, diabetes, etc.

The recommended organization would be located in a large city hospital. The staff would consist of a director, three physicians, two dietitians, a psychiatrist, a laboratory technician, two social workers, and a clerk. A number of laboratory studies would be performed including, in addition to routine determinations, analyses of vitamin C, urinary thiamine, urinary riboflavin, and electrolytes.

The Nutrition Division could plan courses for members of the Department of Public Health, such as public health nurses, dietitians employed by other state and city agencies, general physicians, and school physicians. Furthermore, this division could furnish consultants to other departments within and outside the Department of Health, would engage in the nutrition and education in medical schools and hospitals, help improve dietary practices in various state institutions, and advise various industrial hygiene divisions.

It is clear that a great deal may be offered by city- and state-organized medicine in improving the role of nutrition as a medical science and as an adjunct toward the health of the public.

A special commendation should be made to the Commission on Nutrition, State of Pennsylvania, under the chairmanship of Dr. Michael G. Wohl, whose members include Drs. T. E. Machella, R. E. Olson, H. N. Seiple, J. N. Seitchik, P. L. Shallenberger, Paul C. Shoemaker, J. M. Strang, and C. W. Wirts, Jr.

It is hoped that through these means some of the progress in clinical nutrition can be brought to a more practical application to the health of the people.

—S. O. Waife, M.D.

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Editorial . . .

The New President

WALTER P. ADAMS, M.D., a native of Norfolk and a graduate of the University of Virginia, comes to the Presidency of The Medical Society of Virginia with an extensive knowledge of the problems of the Society and the profession.

Among the positions which he has held in the past are: The Presidency of the Norfolk County Medical Society, Councilor to the 2nd District, and the Presidency of the Medical Alumni of the University of Virginia.

During World War II he saw active service as a Medical Officer in the U. S. Navy.



WALTER P. ADAMS, M.D.
President, The Medical Society of Virginia

Before and after his military service he has been engaged in the private practice of Internal Medicine in Norfolk.

A short biographical sketch may be of interest to those who do not know his personal background. He was born in Norfolk, Virginia, on February 2, 1899. His parents, now deceased, were Dr. Walter J. Adams, long active in the practice of medicine and

Pauline Forstall Adams, one of the early women lawyers of Norfolk. After his graduation from the Medical School of the University of Virginia in 1922, he served as intern at Sarah Leigh Hospital, and continued association with the Sarah Leigh Clinic until its dissolution in 1932. He is a Fellow of the American College of Physicians.

In 1929 he married Charlotte Norton Wales. They have two children and four grandchildren.

Dr. Adams has been very active in his church, Christ and St. Luke's, and has served many years on the Vestry.

To the present writer the most impressive character trait of Walter P. Adams is his sincere and quiet devotion to the highest ideals of the medical profession. He is ever ready to work and serve in any capacity in which he believes he can possibly contribute to the improvement of the practice of medicine. In considering any problem dealing with the medical profession, his first thought is invariably "What course ultimately will be best for the patient?" Never is his intellectual position rigid. He has the ability to investigate all sides of a question and then weigh the evidence before reaching a conclusion, but once he is convinced of the right course, he stands on his convictions.

A strong supporter and advocate of organized medicine, because he believes that such organization is essential for the best practice, Walter Adams is indeed fitted to be President of The Medical Society of Virginia for the coming year. We may be confident that the decisions which he will be called upon to make will be calm, reasoned, and in the best interests first, of the recipients of medical care, and next, of those whose duty it is to render it.

W. C. Salley, M.D.

Society Proceedings . . . .

Fairfax County Medical Society.

Dr. Robert Parrot, physician-in-chief at Children's Hospital, Washington, delivered the first Annual Zinzi Memorial Lecture of the Fairfax County Medical Society held on October 11th. His subject was Newly Isolated Viruses in Children.

Shortly after Dr. Zinzi's death, the Society voted to establish at each October meeting The Zinzi Memorial Lecture to deal with some phase of pediatrics as a tribute to the outstanding contributions which Dr. Frank Zinzi has made to pediatrics in Northern Virginia.

Dr. Ardwin Barsanti is chairman of the lecture committee. Serving with him were Drs. Frances Ayres, John Bunce, Harry McDermott and Adrian Recinos.

Alexandria Medical Society.

At the meeting of this Society on September 11th, the speaker was Dr. James E. Chapman, Washington, D. C. He is chairman of the Committee on Emergency Medical Service in Washington and described the manner in which his committee is formed, and in a very interesting talk told how they function, based mostly on teams made up according to location. They have attended courses on management of mass casualties.

Williamsburg-James City Medical Society.

At a meeting, held on October 8th at the Williamsburg Lodge, W. J. Longan, D.D.S., Richmond, spoke on X-Ray Manifestations of Systemic Diseases.

Southwest Virginia Medical Society.

At the meeting of this Society held in Bristol on September 11th, Dr. J. G. Cox, Hillsville, was elected president; Dr. W. S. Credle, Bristol, vice-president; and Dr. M. A. Johnson, Roanoke, secretary-treasurer. Dr. R. H. Jones, Jr., Roanoke, is the retiring president.

International College of Surgeons.

The United States Section of the College will hold its Mid-Atlantic Regional meeting at the Homestead, Hot Springs, Virginia, November 17-18.

The scientific program will consist of 10 papers, two panels and a sound movie in color. These will cover a wide range of subjects with speakers from all parts of the country. The program committee consists of: Drs. Wade H. St. Clair, Bluefield, honorary chairman; William C. D. McCuskey, Wheeling, West Virginia, co-chairman; George Bourne; Roanoke; Francis McGovern, Danville; and Russell Buxton, Newport News.

Further information may be had by writing Dr. E. G. Gill, 711 South Jefferson Street, Roanoke.

News . . . .

New Members.

Since the list published in the October issue af the Monthly, the following new members have been admitted into The Medical Society of Virginia:

William Bauer, M.D., Norfolk
Mannheim Mendel Bocknek, M.D., Falls Church
Hugh Howard Crawford, M.D., Norfolk
Dirk Enthoven, M.D., Buena Vista
James W. Gibson, M.D., Middleburg
James Phillip Hartley, M.D., Springfield
Elizabeth H. Hill, M.D., McLean
Colin Henri Gard Kendall, M.D., Hampton
John P. McDade, M.D., Franconia
Robert Bernard Neu, M.D., Arlington
John W. Painter, M.D., Fredericksburg
William H. Pifer, M.D., Winchester
Mervyn Stuart Carter Rooney, M.D., Richmond
Frederick Henry Savage, M.D., Richmond
Charles C. Swift, M.D., Franklin
Robert Kenneth Wineland, M.D., Alexandria

Dr. Lewis Honored.

Dr. A. Warner Lewis, Sr., Aylett, was recently honored by the King William Ruritan Club for his "long and faithful service" to the rural peoples of this and adjoining counties. He was presented with a silver bowl. Dr. Lewis has been in practice for forty-five years and has served in three counties answering night and day calls. He has found time to be active in civic projects, serving on the school board for eight years and was a charter member and president of the Ruritan Club.

A.M.A. Clinical Meeting

More than 3,000 physicians are expected to attend the American Medical Association's 12th clinical meeting December 2-5 in Minneapolis.

Designed to help the family physician solve his daily practice problems, the meeting has been planned in cooperation with Minneapolis physicians. General chairman of the meeting is Dr. O. L. Norman Nelson, Minneapolis, president of the Hennepin County Medical Society. Dr. N. L. Gault, Jr., Minneapolis, is the scientific program chairman.

The scientific portion of the program will be held in Minneapolis Auditorium, while the House of Delegates, the A.M.A. policy-making body, will meet at the Leamington Hotel, headquarters for the meeting.

In Minneapolis Auditorium will be 100 scientific exhibits prepared by physicians and the A.M.A. Council on Scientific Assembly. Among them will be exhibits on medical history in Minnesota, including information about Indian medicine and the Mayo Clinic.

There will also be approximately 130 technical exhibits presented by pharmaceutical houses, medical equipment manufacturers, food processors, medical book publishers and other commercial organizations.

Approximately 200 physicians will participate in lecture meetings, symposiums, and panel discussions on such subjects as neurology and psychiatry, cardiovascular disease, arthritis, orthopedics and various other medical topics.

Approximately 35 medical motion pictures will

be shown in Minneapolis Auditorium. A special feature will be a symposium on proctology Wednesday evening, December 3. Moderated by Dr. Raymond Jackman, Mayo Clinic, it will include three films made by Dr. Jackman; Dr. Malcolm Hill, Los Angeles, and Dr. Lawrence Abel, London, England.

Another special feature of the meeting will be a trans-Atlantic conference between A.M.A. members in Minneapolis and British Medical Association members in Southampton, England. It is scheduled for Friday, December 3. The British association will be holding a clinical session at that time.

Closed circuit colored television again will be shown to doctors attending the meeting. It will be sponsored by Smith, Kline and French Laboratories, Philadelphia pharmaceutical house. Programs originating in the Mayo Memorial Building of the University of Minnesota Hospital will be shown in Minneapolis Auditorium. Among the topics will be cardiac by-pass, neurology, orthopedic problems of the extremities, and caesarian section.

Dr. Byrd S. Leavell,

Charlottesville, has been named assistant dean of the University of Virginia School of Medicine. He will succeed Dr. Henry B. Mulholland who has retired from this position. Dr. Leavell has been a member of the University faculty since 1939 and professor of internal medicine since 1954.

Dr. Mulholland will continue his medical practice and teaching duties as professor of internal medicine.

Dr. David Garner,

Roanoke, has been named chairman of the physicians' division for the United Fund campaign. He will be assisted by Dr. Harry B. Stone.

Medical Seminar Cruise.

The Alumni Association of the New York University College of Medicine is sponsoring a medical seminar cruise to the Caribbean, visting San Juan, St. Thomas, Ciudad Trujillo, Cap Haitien, and Nassau. The cruise will be aboard the *M. S. Italia* sailing from New York on February 21st and returning on March 8th.

This medical seminar constitutes 30 hours acceptable Category I Postgraduate Requirements A.A.P.G. The *M. S. Italia* has been chartered expressly for the purpose of conducting this medical seminar.

For further details, write Dr. William N. Hubbard, Jr., Associate Dean, New York University College of Medicine, Room 164, 550 First Avenue, New York 16, New York.

Dr. Benedict Nagler,

Superintendent of the Lynchburg Training School and Hospital, has been invited by the director of the National Institute of Health, Bethesda, Maryland, to become a member of the Neurology Field Investigations Committee of the National Institute of Neurological Diseases and Blindness. The invitation, tendered by request of the Surgeon General of the United States, covers a four-year term which began October 1st, to serve as a consultant to the Public Health Service for the program of field investigations and pilot projects administered by the National Institute of NDB.

Dr. James R. Cash,

Walter Reed Professor of Pathology at the University of Virginia School of Medicine, has been appointed professor of pathology at the Basic Medical Science Institute in Karachi, Pakistan. He assumed his duties on October 1st, and his appointment is for two years.

Dr. Cash will be on leave of absence from the University, after which he plans to resume his affiliation with the department of pathology. He is retiring as chairman of the department of pathology after twenty-seven years of service. Dr. David E. Smith will succeed him as chairman.

Program on Surgical Specialties.

The Faculty of the University of Virginia School of Medicine cordially invites you to spend a day at the Medical Center in Charlottesville with the Staffs of the several Surgical Specialties.

On November 14, beginning at 9:15 a.m. in the Medical School Auditorium, a program on "Surgery in the Aged" will be presented. Topics pertaining to the elderly patient such as evaluation for operation, choice of anesthetic agent, diagnosis of acute abdominal disease, management of the arteriosclerotic limb, urologic problems and trauma will be considered. This will be followed by an informal question and answer period at the end of the morning.

Luncheon is planned in Newcomb Hall, the new Student Activities Building.

In the afternoon each of the surgical disciplines will conduct informal teaching clinics for small groups, covering a variety of topics differing from the theme of the morning program. It will be pos-

sible for each participant to attend two such clinics. In order that the clinics may be arranged to satisfy as many participants as possible, we would like for you to let us know, in the order of your preference, the clinics you would like to attend. The clinics to be presented are: Anesthesiology, Cardio-vascular Surgery, General Surgery, Gynecology, Neurological Surgery, Ophthalmology, Orthopedic Surgery, Oto-rhinolaryngology, Plastic Surgery, Thoracic Surgery and Urology.

A detailed program will be mailed to those who indicate their interest in attending.

News from Health Department

Dr. J. D. Creger, a graduate of MCV and recently in private practice at St. Paul, Virginia, has assumed his duties as assistant to Dr. R. W. Jessee in the Dickenson-Russell-Wise District, following a period of inservice training.

Dr. H. J. Rittner, recently in private practice at Mt. Holly, Virginia, has completed a period of in-service training and has been assigned to his duties as assistant to Dr. William Y. Garrett in the Norfolk-Princess Anne-South Norfolk-Virginia Beach Health District.

Dr. Stuart C. Nottingham has assumed the position as Director of the Clarke-Frederick-Loudoun-Winchester Health District following a preliminary period of inservice training. He succeeds Dr. A. L. Lindall who retired on July 1, 1958.

Dr. Nottingham is a graduate of MCV and has recently completed two years' service in the U. S. Public Health Service.

Dr. Samuel H. Carter,

Verona, has been named as physician for Mary Baldwin College, Staunton, succeeding Dr. Paxton Powers. He will continue his regular practice, giving part time to the College.

Announce Association.

Drs. William Minor Deyerle and Virgil R. May, Jr., Richmond, announce the association of Dr. Edwin W. Hakala, for the practice of orthopedic surgery.

Dr. Wendell J. Pile,

Warwick, addressed the Wythe Woman's Club of Hampton at their September meeting. He spoke on Mental Health.

Dr. Weir M. Tucker,

Richmond, has been appointed as chairman of the newly created division of neurology of the Medical College of Virginia.

Dr. M. J. W. White,

Luray, was speaker at the dedication of the Page Memorial Hospital on September 7th. His subject was Our Hospital of Today and Its Future.

Medical Seminar.

The Sixth Annual Medical Seminar of the Bluefield Sanitarium, Stevens Clinic, and Clinch Valley Clinic will be held at the Bluefield Country Club, Bluefield, November 12th. The following program will be presented: Early Ambulation Following Cataract Surgery by Dr. Fred D. White, Bluefield Sanitarium; Bile Stasis—The Common Denominator of Extrahepatic Biliary Tract Disease by Dr. Oscar M. Weaver, Jr.; Stevens Clinic; Little Strokes by Dr. William F. Hillier, Jr., Bluefield Sanitarium; Diagnosis and Treatment of Bleeding Disorders by Dr. John B. Graham, Professor of Pathology, University of North Carolina; Ectopic Pregnancy by Dr. H. H. Ware, Jr., Professor of Obstetrics and Gynecology, Medical College of Virginia; and The Eye Bank's Contribution to Ophthalmology by Dr. Elbyrne G. Gill, Roanoke.

All physicians are invited to attend this Seminar.

Dr. Houston L. Bell

Has been re-elected president of the Roanoke Unit of the American Cancer Society.

Dr. Pitt Retires.

After 44 years of service, Dr. Cullen Pitt has retired as University of Richmond physician. He will continue his association with the University as physician to the athletic association. Dr. Pitt is the last of the "old guard" to retire from the University staff.

Dr. J. Langdon Moss, Richmond, will replace Dr. Pitt as University physician. He will continue his general practice, giving part-time service to the school.

Dr. William D. Dolan

Has been elected president of the Arlington Unit of the American Cancer Society.

Dr. Richard H. Cross,

Concord, has been presented the Concord Ruritan Citizenship Award as the community's outstanding citizen of 1958.

For Sale.

B3002A G. E. Vertical Fluoroscope, with 10 MA unit and XPT tube, type B-2 screen, 8 years old,

original owner, regular G. E. maintenance. Sold new $1,500.00. Price $650.00 F.O.B. Roanoke, Virginia. Apply to #425, care the Monthly, 4205 Dover Road, Richmond 21, Virginia. (*Adv.*)

Doctor's Suite Available.

Crestview Shopping Center in Richmond. May share secretarial help and waiting room with dentist in adjoining suite. Phone ATlantic 8-2388, Richmond, Virginia. (*Adv.*)

House Physician Wanted

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Obituaries . . . .

Dr. Thomas Edgar Painter,

A member of the Staff of Saint Albans Psychiatric Hospital, Radford, died September 21st. He was forty-five years of age and a graduate of the Medical College of Virginia in 1931. During World War II, Dr. Painter served as a lieutenant colonel in the Air Force. Before coming to Radford, he served on the staffs of Eastern State Hospital and Westbrook Sanatorium in Richmond. He had been associated with Saint Albans since 1947. Dr. Painter had been a member of The Medical Society of Virginia for twenty-seven years.

His wife and a daughter survive him.

Dr. Poindexter.

Dr. Frank Wilmore Poindexter died of a heart attack in his favorite habitat on the Golf Course at the James River Country Club on July 4, 1958. The end came suddenly, but quietly on the first green while he was enjoying a game of golf with his friends.

Dr. Poindexter was seventy years of age and was born and raised in Bedford County, Virginia. He went to Lynchburg College and later to the Medical College of Virginia where he graduated in 1913. He was in general practice for a short time and then went to New York where he took post-graduate special training at the Post Graduate Hospital.

He came to Newport News in 1917 and was associated with the late Dr. John W. C. Jones for several years in the practice of his specialty. He and his associates conceived and built the Medical Arts Building where he has had his office since 1930.

We are indebted to him for his part in founding the Virginia State Ophthalmological and Otolaryngological Society as he was one of the Charter Members.

Dr. Poindexter was a board member of the American Ophthalmological and Otolaryngological Society. Also he was a member of the American College of Surgeons for many years. He was also an active member of the Tidewater Ophthalmological and Otolaryngological Society. In addition, of course, he was a member of all the local medical societies and the active staff of both the Riverside Hospital and the Mary Immaculate Hospital. He also consulted at times in the Dixie Hospital and the Whitaker Memorial Hospital.

Dr. Poindexter worked long and hard at his specialty. He enjoyed a large practice and his devoted patients will long remember him for his patient, honest, conscientious and efficient care. Also his many associates in the Medical Profession will remember him as a serious, ethical physician whose genteel character has never been questioned. We lose a fine friend and colleague and his patients lose an understanding, devoted practitioner.

THEREFORE BE IT RESOLVED by the Newport News Medical Society that we extend to the bereaved family our deepest sympathy for their great loss and to assure them that the community and his friends and colleagues are deeply grieved because of his passing.

BE IT FURTHER RESOLVED that resolutions be written into the minutes of the Society and that copies be sent to the family and the Virginia Medical Monthly.

Dr. McCaffrey.

The members of the Arlington County Medical Society are grieved at the passing of our friend and fellow physician, Dr. Charles Francis McCaffrey, Jr., and wish to express to the members of his family our deepest sympathy.

Dr. McCaffrey died June 25, 1958, at Arlington Hospital of a heart ailment at 51 years of age. He was born in Sommerville, Massachusetts, and was a graduate of Phillips Exeter Academy, Harvard University and Georgetown Medical School. During World War II he served aboard the Carriers Yorktown and Enterprise and was a survivor of the sinking of the Wasp. At the time of his retirement from the Navy in 1951, because of his health, he held the rank of Commander. Following this he lived in Arlington where he was Assistant Public Health Director, and had done much to improve the relationship between the Department of Public Health and the members of the Arlington County Medical Society with his winning personality.

We count it a high privilege to have been with him, to have worked with him as a fellow physician and to have known him as a true friend.

THEREFORE, BE IT RESOLVED by the Arlington County Medical Society that we extend to the bereaved family our deepest sympathy.

BE IT FURTHER RESOLVED that a copy of these resolutions be tended Mrs. McCaffrey and that they become a part of the minutes of the Arlington County Medical Society.



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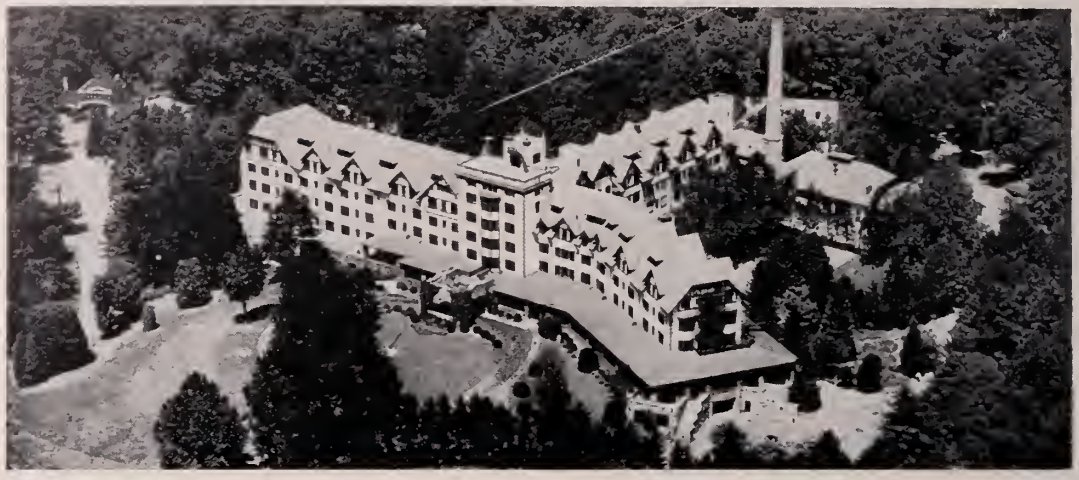
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The next meeting of the Virginia Board of Medical Examiners will be held in the Richmond Hotel, Richmond, Virginia, December 3, 1958. The examinations will be held in the same hotel December 4-6, 1958, inclusive. All applications and other documents pertaining to the examinations or to matters to be discussed by the Board must be on file in the Secretary's office on or before November 10, 1958. The Secretary of the Board is Dr. K. D. Graves, 631 First Street, S. W., Roanoke, Virginia.

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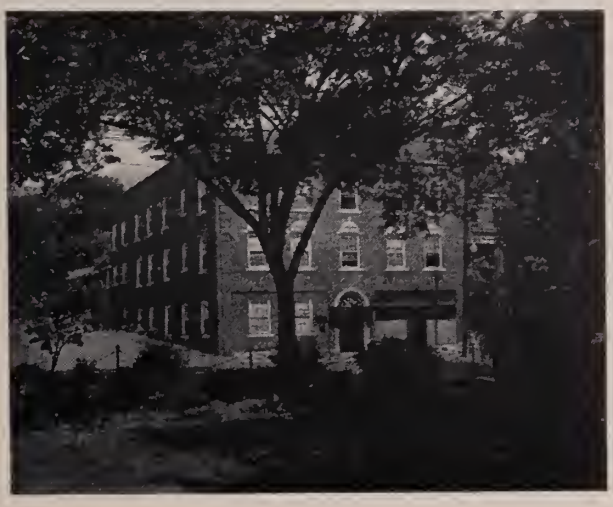
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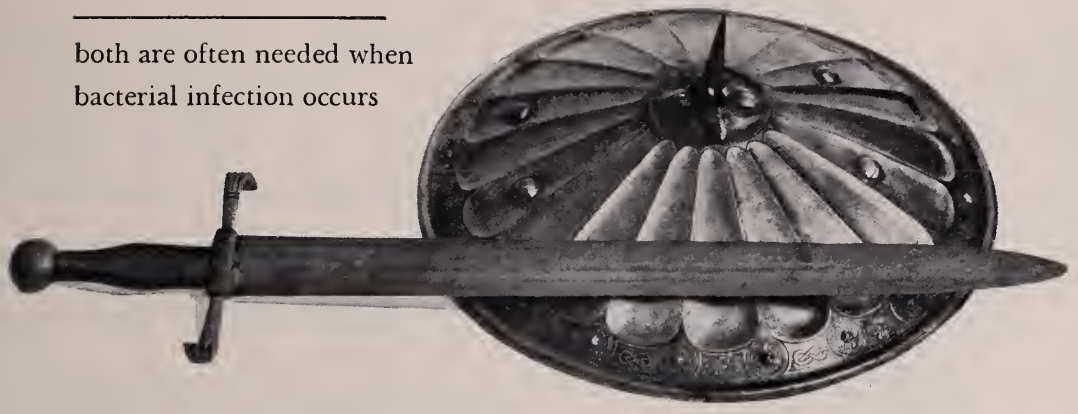
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sustained coronary vasodilation with **PETN** — pentaerythritol tetranitrate a leading, long-acting nitrate

"In diagnosis and treatment [of cardiovascular diseases] . . . the physician must deal with both the emotional and physical components of the problem simultaneously."[1]

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Miltrate is recommended *for prevention* of angina attacks, *not for relief* of acute attacks.

Supplied: Bottles of 50 tablets.
Each tablet contains: 200 mg. Miltown + 10 mg. pentaerythritol tetranitrate.
Usual dosage: 1 or 2 tablets q.i.d. *before meals* and at bedtime.
Dosage should be individualized.

For clinical supply and literature, write Dept. 58-B

1. *Friedlander, H. S.: The role of ataraxics in cardiology. Am. J. Card.* 1:395, *March 1958.*
2. *Shapiro, S.: Observations on the use of meprobamate in cardiovascular disorders. Angiology* 8:504, *Dec. 1957.*

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BECKER, M. C., Simon, F. and Bernstein, A.: J. Newark Beth Israel Hosp. **9**:58 (January) 1958.

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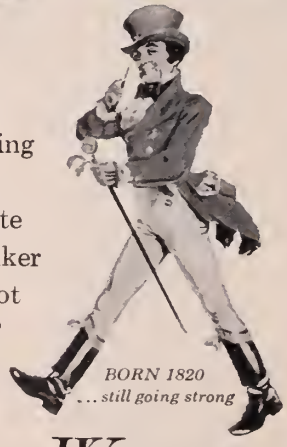


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Acetylsalicylic acid	325 mg.
Aluminum hydroxide	75 mg.
Ascorbic acid	20 mg.

Packaging: SIGMAGEN® Tablets, bottles of 100 and 1000.

References: 1. Spies, T. D., et al.: J.A.M.A. 159:645, 1955. 2. Spies, T. D., et al.: Postgrad. Med. 17:1, 1955. 3. Gelli, G., and Della Santa, L.: Minerva Pediat. 7:1456, 1955. 4. Guerra, F.: Fed. Proc. 12:326, 1953. 5. Busse, E. A.: Clin. Med. 2:1105, 1955. 6. Sticker, R. B.: Panel Discussion, Ohio State M. J. 52:1037, 1956.

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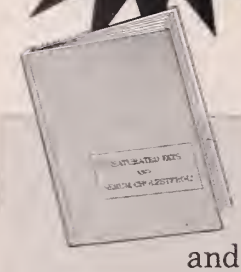
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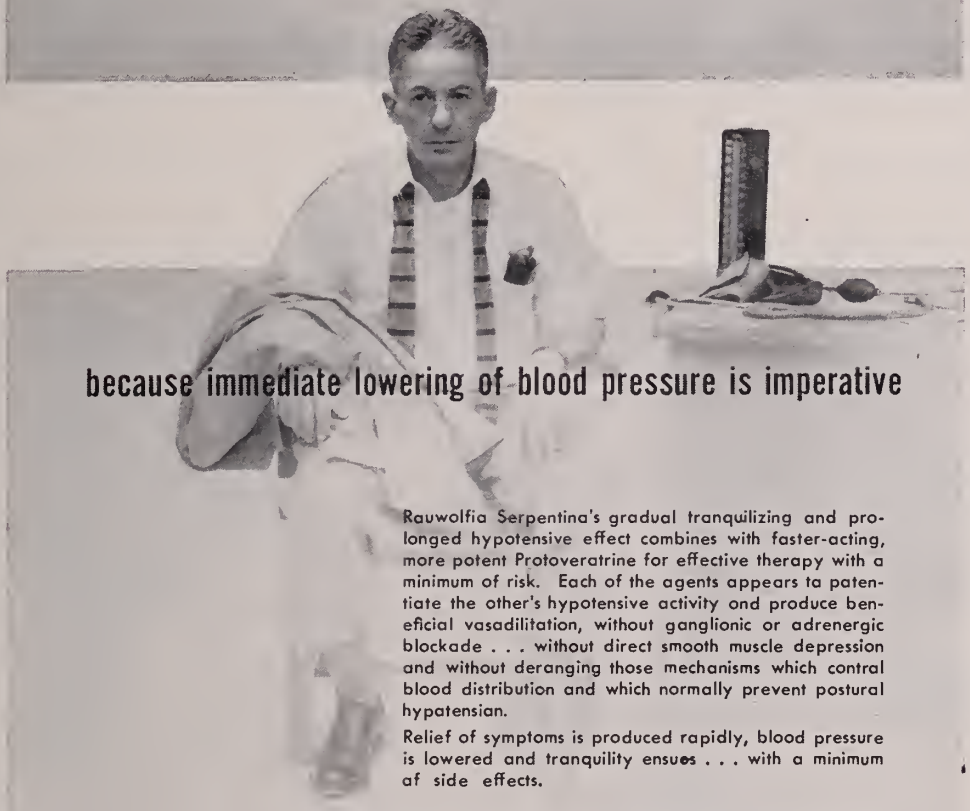
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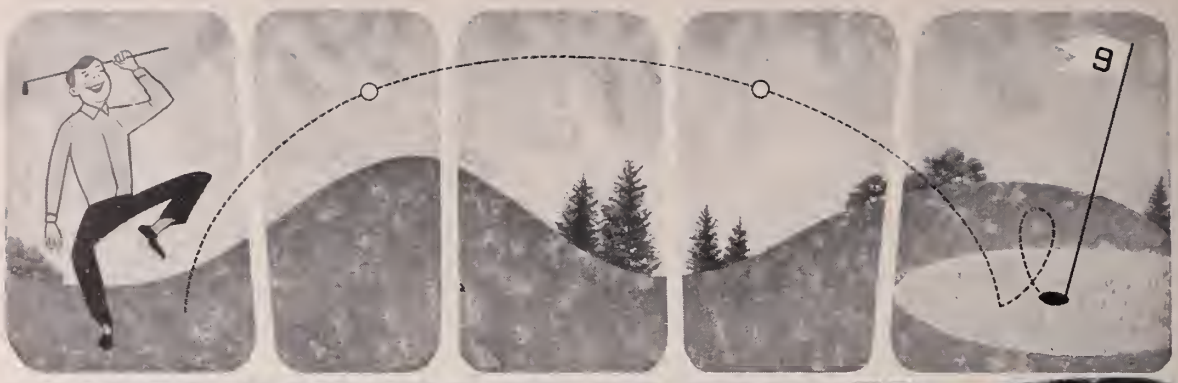
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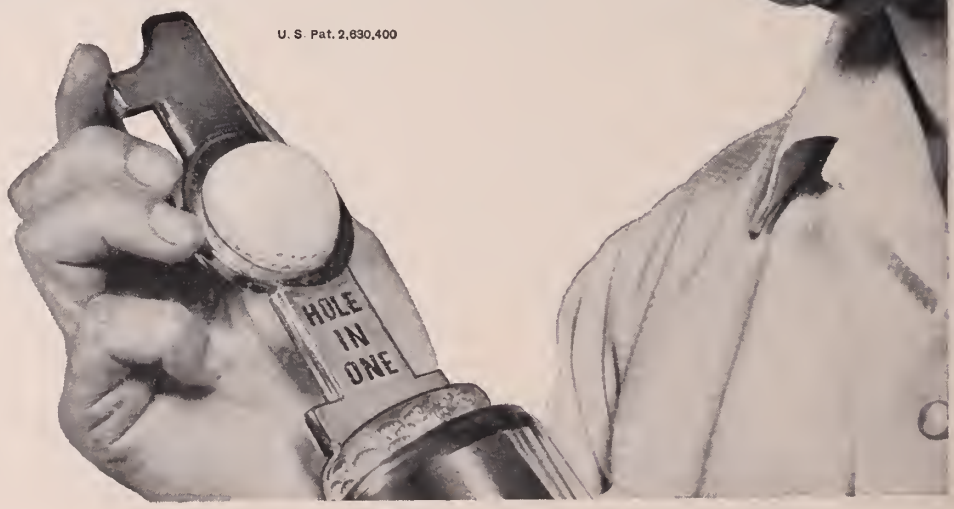
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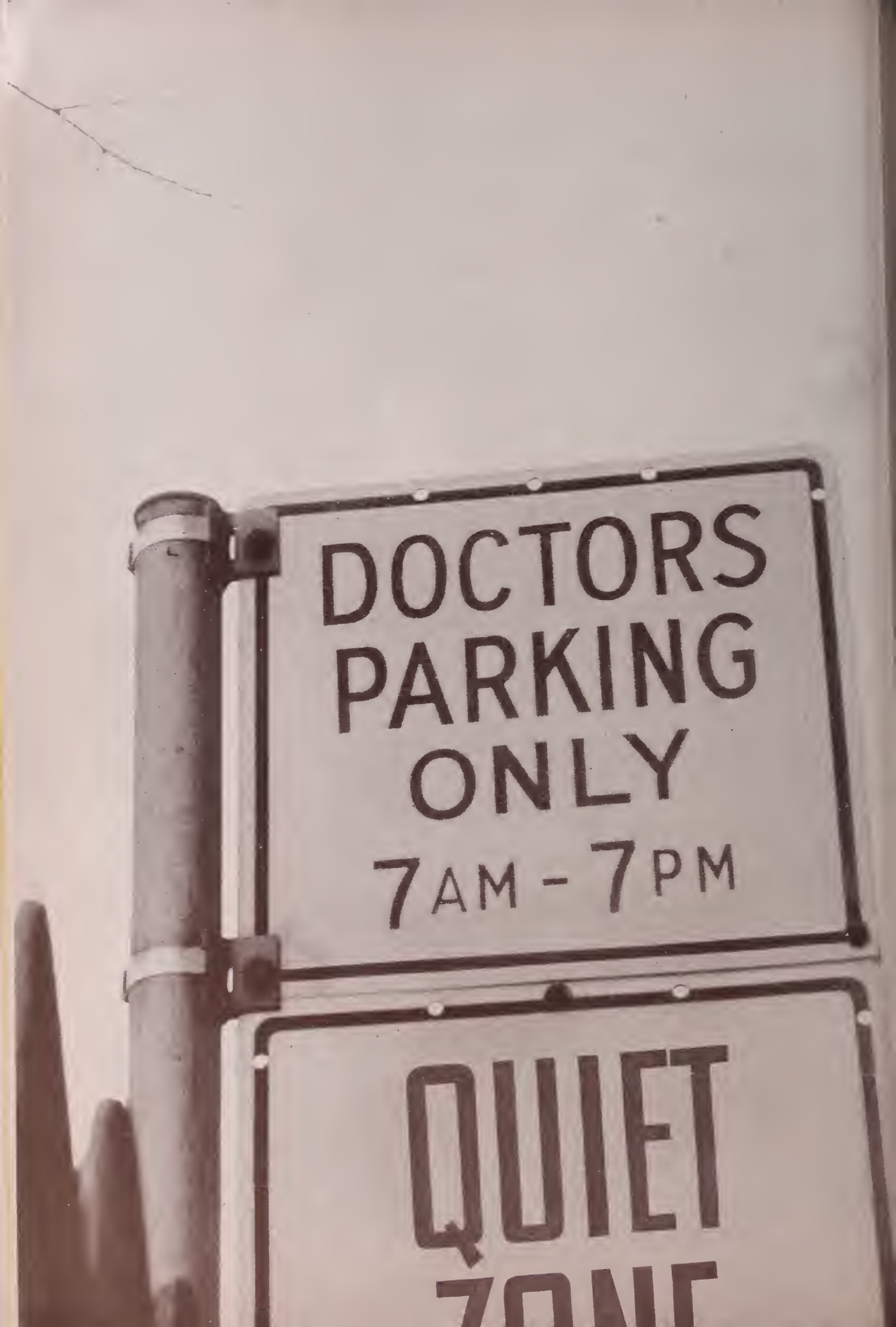
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references:
1 Grieble, H.G., and Jackson, G.G.: Prolonged Treatment of Urinary-Tract Infections with Sulfamethoxypyridazine. *New England J. Med.* 258:1-7, 1958
2. Editorial: *New England J. Med.* 258:48-49, 1958.

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1. Levy, S., *J.A.M.A.*,153:1260,1953
2. Thompson L., Procter, R., *North Carolina M. J.*, 15:596,1954
3. Thompson, L., Procter, R., *Clin. Med.* 3:325,1956

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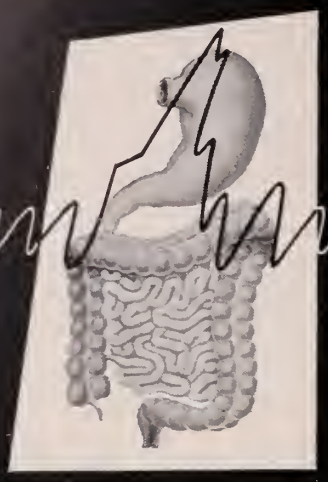
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Source—Meyer, O. O.: Northwest Med. *53*:1006, 1954.

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*Bauer, H. G.; Seegers, W.; Krawzoff, M., and McGavack, T. H.: New York J. Med. *58*:520 (Feb. 15) 1958.

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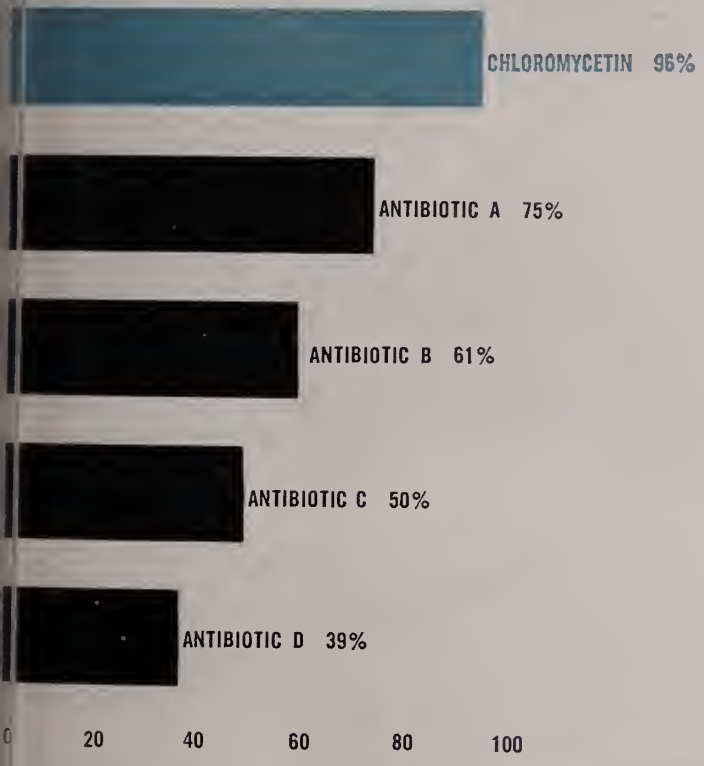
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T CHLOROMYCETIN AND TO FOUR OTHER MAJOR ANTIBIOTICS*



apted from Godfrey & Smith.[1] Staphylococci studied were strains isolated from 28 patients in a general hospital.

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(2) Best, W. R.; Louis, J., and Limarzi, L. R.: M. Clin. North America (Jan.) 1958, p. 3.

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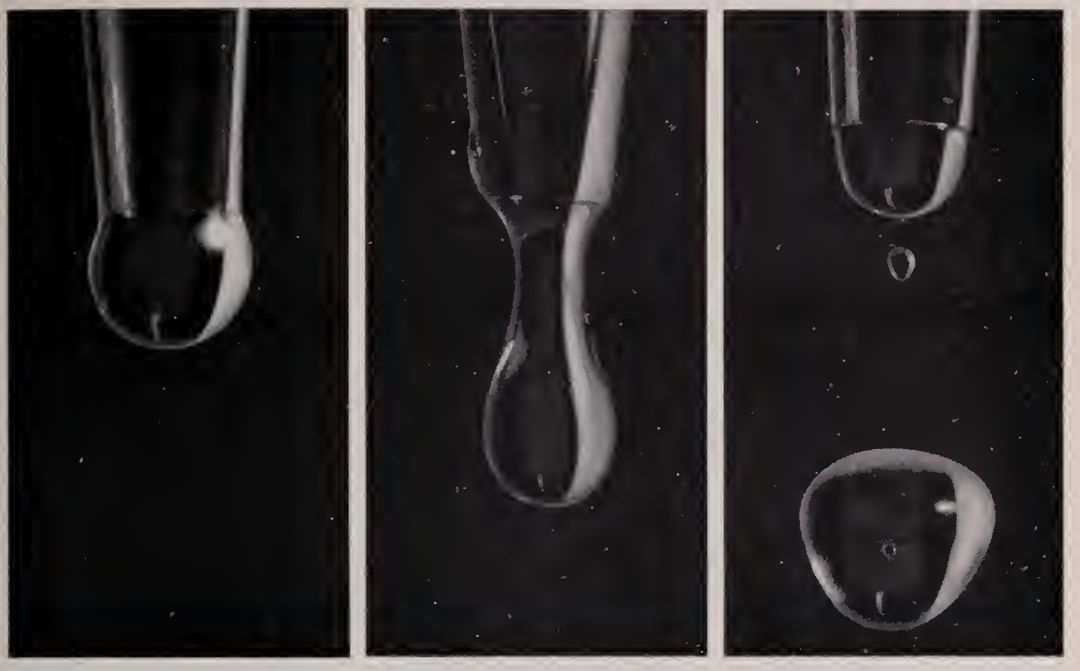
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Charlottesville
DuPont Guerry, III, M.D., Richmond
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Charles Frankel, M.D., Charlottesville
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Aging and Chronically Ill

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In Biliary Distress

ZANCHOL®

Improves Flow and Color of Bile

Zanchol (brand of florantyrone), a distinct chemical entity unrelated to the bile salts, provides the medical profession with a new and potent hydrocholeretic for treating disorders of the biliary tract.

The high degree of therapeutic activity of this new compound and its negligible side reactions yield distinct clinical advantages.

- Zanchol produces a bile low in sediment.
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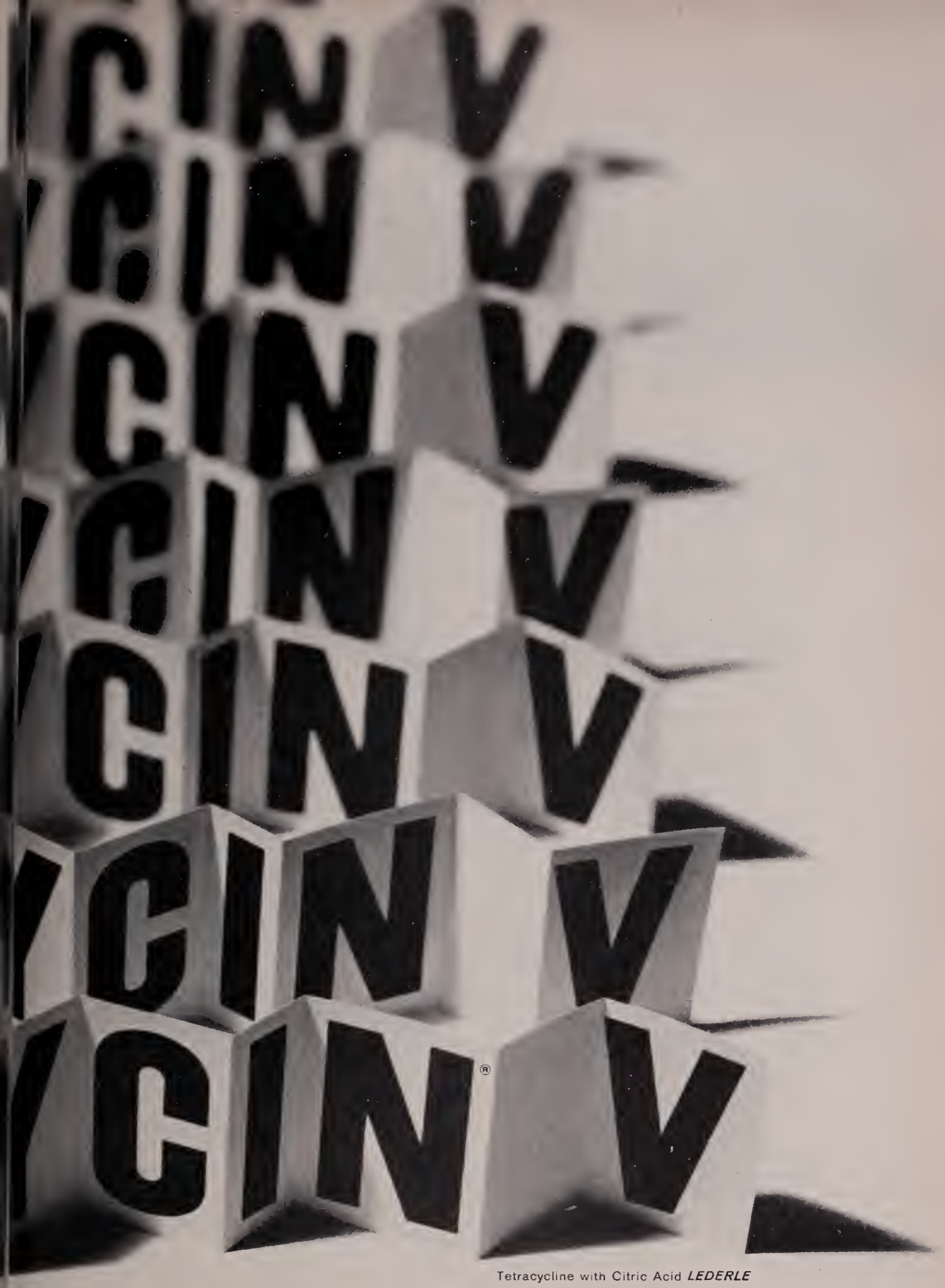
Bile with these qualities minimizes biliary stasis, reduces sediment and debris in the bile ducts and discourages the ascent of infection.

For these reasons ZANCHOL has shown itself to be a highly valuable agent in chronic cholecystitis, cholangitis and care of patients following cholecystectomy.

Administration: One tablet three or four times a day. Zanchol is supplied in tablets of 250 mg. each. G. D. Searle & Co., Chicago 80, Illinois. Research in the Service of Medicine.

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Tetracycline with Citric Acid *LEDERLE*

ERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York Lederle

Aluscop
CAPSULES

ANTICHOLINERGIC • ANTISECRETORY • ANTI-ENZYME • ANTACID

with a medical splint

Aluscop capsules, a unique preparation equally as effective as the liquid form, provide rapid and prolonged relief of pain, discomfort and dysfunction in the management of peptic ulcer, hyperacidity, gastro-intestinal spasm or hyperirritability.



Aluscop TREATS THE ENTIRE DYSPEPTIC SYNDROME

- **Methscopolamine nitrate**—the most potent antisecretory agent—35 times that of atropine sulfate, inhibits gastric acid secretion and acts as a "medical splint" through its visceral antispasmodic action.
- **Dihydroxy aluminum aminoacetate and magnesium hydroxide**—two of the most effective antacids—exert dual action without constipating effect.
- **Sodium lauryl sulfate**—a pepsin inactivator—minimizes pepsin erosion and further destruction of tissue to hasten healing of lesions.

Composition: 1 tablespoonful (15 cc.) of suspension or 2 capsules contain: methscopolamine nitrate 2.5 mg., dihydroxy aluminum aminoacetate 900 mg., magnesium hydroxide 75 mg., and sodium lauryl sulfate 40 mg.

Dosage: 1 tablespoonful or 2 capsules after each meal and at bedtime, as required.

Supplied: Bottles of 100 capsules and 12 oz. of suspension.

Lloyd, Dabney & Westerfield, Inc.
Cincinnati, Ohio
Fine Pharmaceuticals Since 1894



Results with "... antacid therapy with DAA are essentially the same as ... with potent anticholinergic drugs."

Alglyn®

Dihydroxy aluminum aminoacetate, N.N.R.

In recent years, a number of new synthetic anticholinergic drugs with numerous and varying side effects have been investigated for treatment of peptic ulcer. However, a double-blind study conducted recently by Cayer et al suggests that the use of such anticholinergic drugs is seldom necessary. The authors concluded that "The percentage of 'good to excellent' results obtained in patients on continuous long-term antacid therapy with DAA (74%) is essentially the same as that previously noted in ulcer patients treated under similar conditions with potent anticholinergic drugs alone."

The authors' choice of dihydroxy aluminum aminoacetate (DAA) was based on the fact that "the tablet form of DAA (is) more active than a variety of straight aluminum hydroxide magmas." They further commented that "Because of the convenience of tablet medication as compared with the liquid gel—a convenience which in the use of other tablets is gained at the expense of therapeutic effectiveness—dihydroxy aluminum aminoacetate was used exclusively."

ALGLYN (dihydroxy aluminum aminoacetate) Tablets are supplied in bottles of 100 tablets (0.5 Gm. per tablet).

BRAYTEN PHARMACEUTICAL COMPANY • *Chattanooga 9, Tennessee*

Exactly how does new Halodrin* restore the "premenopausal prime" in postmenopausal women?

Webster defines "prime" as the period of greatest health, strength, and beauty. In a woman, these are the childbearing years between puberty and menopause—the years when her hormone production is highest.

The inevitable reduction in this hormone production as she enters the menopause often results in physical discomfort in the form of hot flushes, nervousness, insomnia, or a multiplicity of other symptoms with which you are familiar. Superimposed on this physical picture is the psychic trauma brought on by this unavoidable evidence of aging. The thing that brings her to a physician is simply that she "feels bad."

You can't make her 35 again—but the odds are good that you can make her feel like it! The secret is a combination of reassurance and hormones. The exact form and amount of the former defy objective analysis, but the latter can now be provided with scientific precision. Reduced to essentials, here is the explanation of exactly how hormones—in the form of Upjohn's new Halodrin—restore the "premenopausal prime."

The normal premenopausal woman excretes estrogens in the urine in the form of estradiol, estrone, and estriol, in an approximate 28-day average ratio of 39:15:46. Starting with this urinary excretion of estrogens, it is possible to calculate backwards and estimate the amount of estradiol that must have been secreted endogenously in order to produce these urinary levels. This is possible because the proportion of estrogens which appears in the urine following parenteral administration has been established in castrated women.

On this basis, the average endogenous output of estrogens is about 160 micrograms per day during a menstrual cycle, and 80 micrograms per day in postmenopausal women (see chart opposite). Therefore, the restoration of the "premenopausal prime" in the postmenopausal woman requires the replacement of approximately the equivalent of the 80 micrograms of estradiol per day that she no longer secretes endogenously.

Oral ethinyl estradiol is about 2 to 2½ times as potent as parenteral estradiol. Therefore, the replacement of 80 micrograms of endogenous estradiol production per day is accomplished by the oral administration of 32 to 40 micrograms of ethinyl estradiol per day.

Each Halodrin tablet contains 20 micrograms of ethinyl estradiol, which means that the recommended dosage of 2 tablets per day provides 40 micrograms of ethinyl estradiol. This offsets the loss of 80 micrograms of endogenous estradiol production in the menopausal woman; i.e., restores the "premenopausal prime."

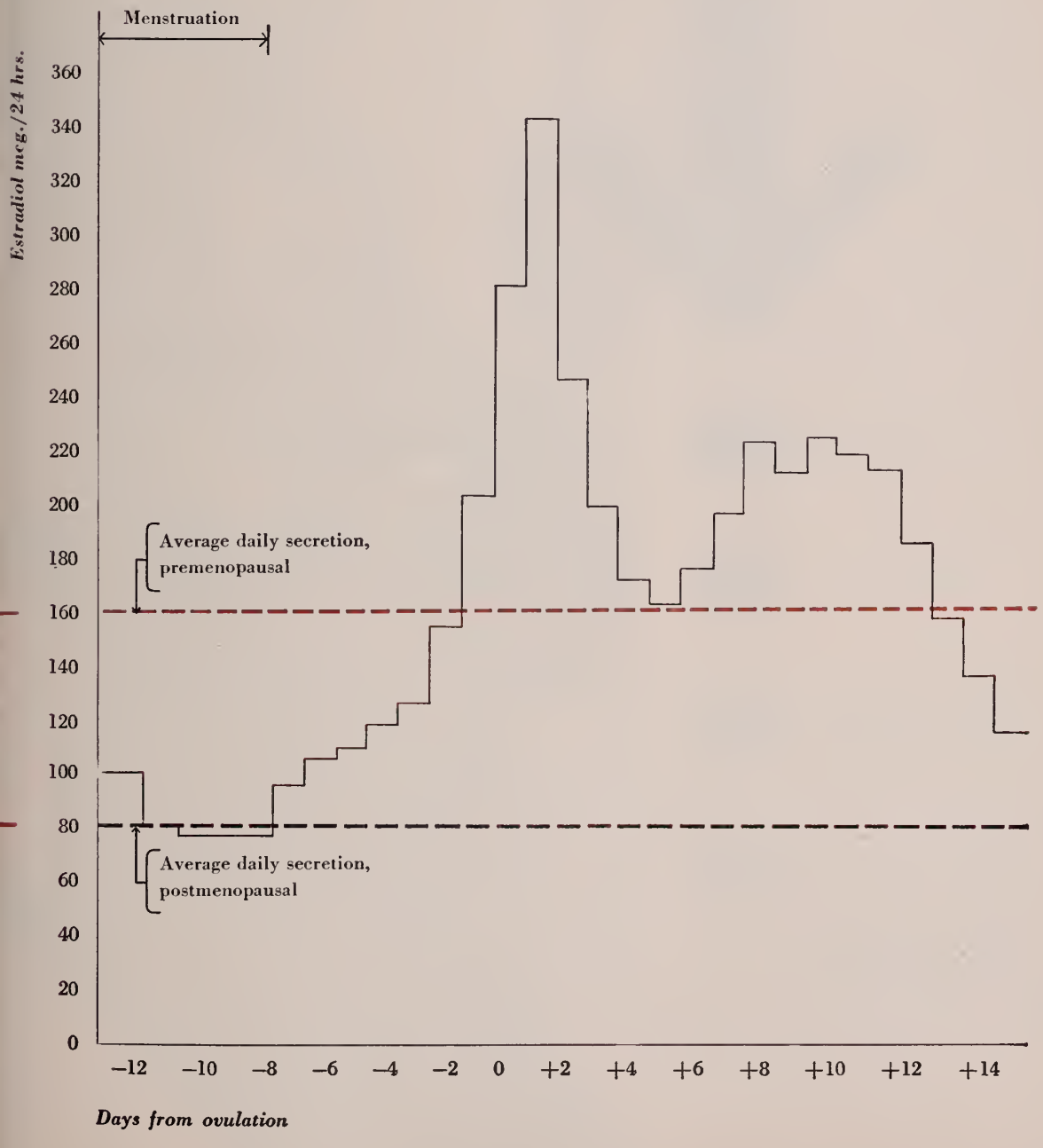
Each Halodrin tablet also contains 1 mg. of Upjohn-developed Halotestin* (fluoxymesterone)—the most potent oral androgen known. The primary purpose is to "buffer" the ethinyl estradiol just enough to prevent breakthrough bleeding, which is obviously undesirable in the menopause. It also exerts other beneficial hormonal effects, one of which, in common with ethinyl estradiol, is a powerful anabolic action so desirable in patients of advanced years.

Upjohn

*TRADEMARK, REG. U.S. PAT. OFF.

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Endogenous estrogen secretion (mcg./24 hours)
(calculated from average 24-hour urinary excretion of estradiol, estrone, and estriol)





PENETRATES*



SOFTENS FECES



ADDS FORMED BULK



EASES EVACUATION

*Unique encapsulation of millions of minute oil globules by Irish moss assures complete penetrant diffusion in stools.

IN CONSTIPATION

TO SOFTEN STOOLS WITHOUT TISSUE DEHYDRATION AND MAKE THEM MOVE WITHOUT STRAINING

KONDREMUL®

COLLOIDAL EMULSION OF MINERAL OIL AND IRISH MOSS patch

PROVEN SAFE...EFFECTIVE • IN PREGNANCY • IN CHILDHOOD • IN MIDDLE-AGED PATIENTS • IN ELDERLY PATIENTS • **THROUGH MORE THAN 25 YEARS OF USE**

AVAILABLE in three pleasant-tasting formulas:

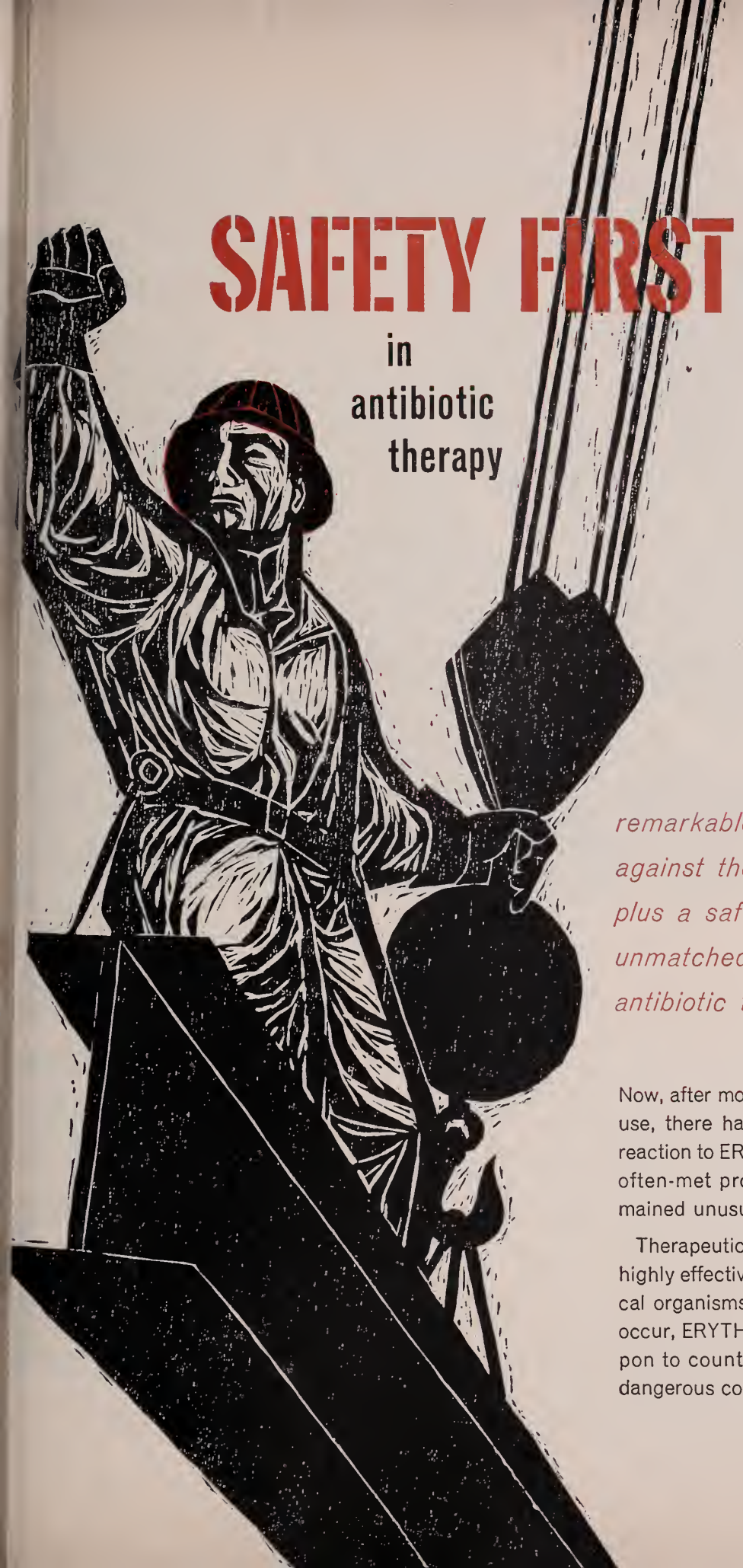
for the average patient
KONDREMUL (Plain)
containing 55% mineral oil. Bottles of 1 pint.

for more hypotonic cases
KONDREMUL WITH CASCARA
0.66 Gm. non-bitter Ext. Cascara per tablespoonful.
Bottles of 14 fl.oz.

for more resistant constipation
KONDREMUL WITH PHENOLPHTALEIN
0.13 Gm. (2.2 gr.) phenolphthalein per tablespoonful.
Bottles of 1 pint.

patch **THE E. L. PATCH COMPANY** Stoneham, Massachusetts

70 YEARS OF SERVICE TO THE MEDICAL PROFESSION



SAFETY FIRST

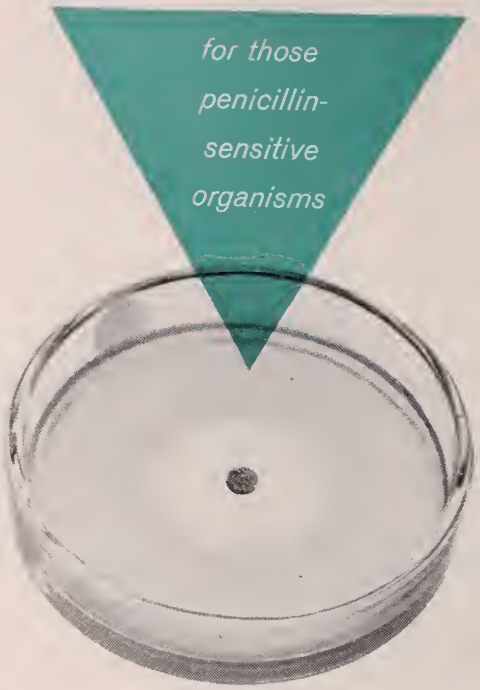
in antibiotic therapy

remarkable effectiveness against the cocci– plus a safety record unmatched in systemic antibiotic therapy

Now, after more than six years of extensive use, there has not been a single serious reaction to ERYTHROCIN. Additionally, the often-met problem of resistance has remained unusually low with ERYTHROCIN.

Therapeutically, you'll find ERYTHROCIN highly effective against the majority of coccal organisms. Where severe viral attacks occur, ERYTHROCIN may well be the weapon to counteract those dangerous complications.

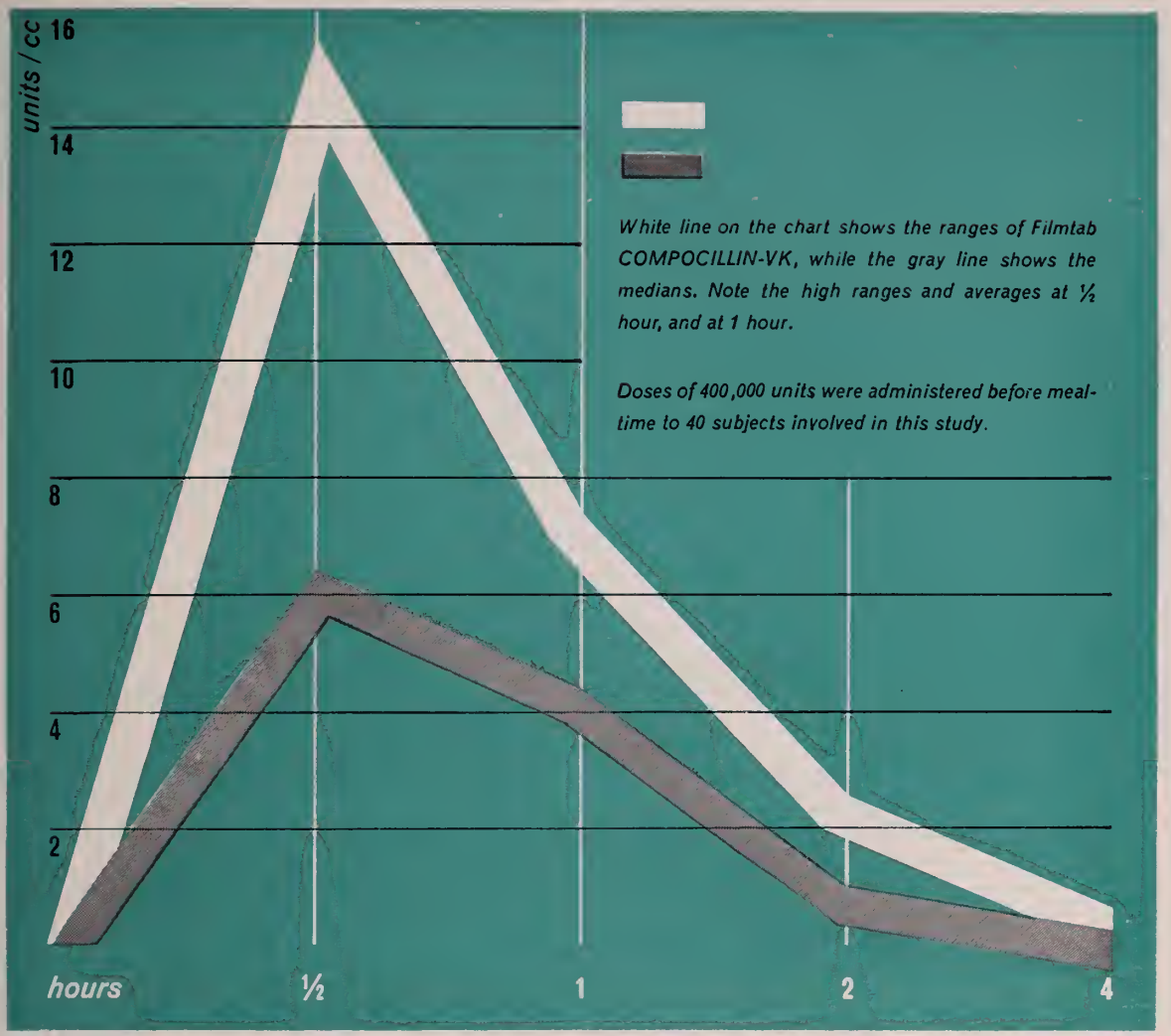
Abbott



the higher blood levels of COMPOCILLIN-VK®

809136

Potassium
Penicillin V



Now, in both Filmtab and Oral Solution, patients get high penicillin V blood levels with Compocillin-VK. Note the chart. Concentrations are three times higher than an equivalent dose of potassium penicillin G.

Compocillin-VK is indicated whenever you desire oral penicillin therapy. In severe infections, oral penicillin should be supplemented by parenteral therapy to obtain the maximum therapeutic response.

Indications:

Against all organisms sensitive to oral penicillin therapy. For prophylaxis and treatment of complications in viral conditions. And as a prophylaxis in rheumatic fever and rheumatic heart disease.

Dosage:

Depending on the severity of the infection, the usual adult dose is 125 to 250 mg (200,000 to 400,000 units) every four to six hours. For children, dosage may be reduced in proportion to body weight.

Supplied:

In Filmtabs, representing 125 mg. (200,000 units) of potassium penicillin V, bottles of 50 and 100. In 250 mg. (400,000 units), bottles of 25 and 100.

For Oral Solution, Compocillin-VK comes in dry granules for easy reconstitution with water. Cherry-flavored, the granules come in 40-cc. and 80-cc. bottles. Each 5-cc. teaspoon of solution represents 125 mg. (200,000 units) of potassium penicillin V.

Compocillin-V® Oral Suspension (Ready-Mixed), Hydrabamine Penicillin V, Abbott, comes in 40-cc and 80-cc. bottles. Each tasty, banana-flavored 5-cc. teaspoonful represents 180 mg. (300,000 units) of penicillin V. At all pharmacies. Abbott



the most effective antibiotic available against staphylococci

CRYSTALLIZED

SPONTIN®

(RISTOCETIN, ABBOTT)

PREPARED FROM PURE CRYSTALS

Provides Outstanding Clinical Effectiveness Against Coccal Infections, Including Resistant Staphylococci and Enterococci[1]

Provides Bactericidal Action Against Coccal Infections[1]

Provides Successful Short-Term Therapy In Endocarditis[2]

Now, after just 12 months, SPONTIN has become an outstanding drug of choice against resistant staphylococci, and in other serious coccal infections.

Six papers presented at the Antibiotics Symposium[1] reported the effectiveness of SPONTIN against resistant staphylococcal infections. Clinical reponses involved enterococcal endocarditis, staphylococcal pneumonias and staphylococcal bacteremias. Many of these patients were going downhill steadily—in spite of treatment by other antibiotics.

Toxicity? Careful attention to dosage recommendations has practically eliminated toxicity and side effects as serious obstacles to therapy. Also, recent improvements have been made in the manufacture of SPONTIN; the drug is now made from pure crystals. A recent report[3] in the Journal of the American Medical Association concluded, "It is our opinion that, if proper precautions are observed, ristocetin is a safe and potent agent to employ in the treatment of staphylococcal infections."

If you do not have the revised literature on this lifesaving antibiotic, please contact your Abbott Representative soon; or write direct to Abbott Laboratories, North Chicago, Illinois.

INDICATIONS: Against a wide range of staphylococcal, streptococcal, pneumococcal and enterococcal infections. A drug of choice for treating serious infections, particularly those caused by organisms that resist all other antibiotics.

DOSAGE: Administered intravenously. In pneumococcal, streptococcal and enterococcal infections, a dosage of 25 mg./Kg. will usually be adequate. Majority of staphylococcal infections will be controlled by 25 to 50 mg./Kg. per day. It is recommended that the daily dosages be divided into two or three equal parts at eight- or 12-hour intervals.

SUPPLIED: In vials containing a sterile, lyophilized powder, representing 500 mg. of ristocetin A activity.
Be sure your hospital has it stocked.

Abbott

1. Sixth Annual Symposium on Antibiotics, Washington, D. C., Oct. 15, 16, 17, 1958.
2. Antibiotics Annual, 1957-58, p. 187-98.
3. J.A.M.A., 167:1584, July 26, 1958.



ACHROCIDIN®

TETRACYCLINE-ANTIHISTAMINE-ANALGESIC COMPOUND LEDERLE

A versatile, well-balanced formula for treating common upper respiratory infections, particularly during respiratory epidemics; when bacterial complications are observed or are likely; when patient's history is positive for recurrent otitic, pulmonary, nephritic, or rheumatic involvement.

CHECKS SYMPTOMS: Includes traditional components for rapid relief of the traditional nonspecific nasopharyngitis, symptoms of malaise, chilly sensations, inconstant low-grade fever, headache, muscular pain, pharyngeal and nasal discharge.

Available on prescription only.

Adult dosage for ACHROCIDIN Tablets and new caffeine-free ACHROCIDIN Syrup is two tablets or teaspoonfuls of syrup three or four times daily. Dosage for children according to weight and age.

TABLETS *(sugar coated)*

Each Tablet contains:

ACHROMYCIN® Tetracycline	125 mg.
Phenacetin	120 mg.
Caffeine	30 mg.
Salicylamide	150 mg.
Chlorothen Citrate	25 mg.

Bottles of 24 and 100.

SYRUP *(lemon-lime flavored)*

Each teaspoonful (5 cc.) contains:

ACHROMYCIN® Tetracycline equivalent to tetracycline HCl	125 mg.
Phenacetin	120 mg.
Salicylamide	150 mg.
Ascorbic Acid (C)	25 mg.
Pyrilamine Maleate	15 mg.
Methylparaben	4 mg.
Propylparaben	1 mg.

Bottle of 4 oz.



Lederle LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

new

Tao*

PRONOUNCED TAY-O

(brand of triacetyloleandomycin with glycosamine)

Capsules / Oral Suspension

designed for effective control of common gram-positive infections

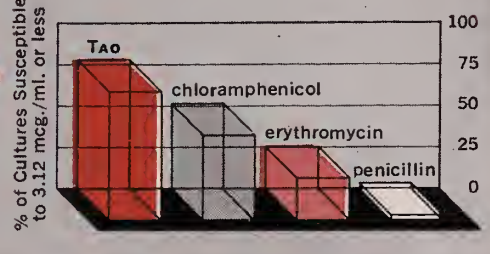
effective . . .

CLINICAL RESULTS	adults	children	all Staph infections
Cured	172 (80%)	148 (89%)	71 (88%)
Improved	28 (13%)	8 (5%)	7 (9%)
Failure	17 (7%)	11 (6%)	3 (3%)

Types of infecting organisms: The majority of identified etiologic microorganisms were Staph. aureus and Staph. albus. Tao has its greatest usefulness against organisms such as: staphylococci (including strains resistant to other antibiotics), streptococci (beta-hemolytic strains, alpha-hemolytic strains and enterococci), pneumococci, gonococci, Hemophilus Influenzae.

even against resistant staph[1,2] . . .

Per cent of "antibiotic-resistant" epidemic staphylococci cultures susceptible to Tao, erythromycin, penicillin and chloramphenicol.[1]



well tolerated . . .

REACTIONS:

(a) adults	(b) children
Total—9.2% (20 out of 217)	Total—0.6% (1 out of 167)
Skin rash—1.4% (3 out of 217)	Skin rash—none
Gastrointestinal—7.8% (17 out of 217)	Gastrointestinal—0.6% (1 out of 167)

There was complete freedom from adverse reactions in 94.5% of all patients. Side effects in the other 5.5% were usually mild and seldom required discontinuance of therapy.

plus . . . stability in gastric acid • rapid, high and sustained blood levels • high urinary concentrations • outstanding palatability in a liquid preparation.

Dosage and Administration: Dosage varies according to the severity of the infection. For adults, the average dose is 250 mg. q.i.d.; to 500 mg. q.i.d. in more severe infections. For children 8 months to 8 years of age, a daily dose of approximately 30 mg./Kg. body weight in divided doses has been found effective. Since Tao is therapeutically stable in gastric acid, it may be administered at any time, without regard to meals.

Supplied: Tao Capsules—250 mg. and 125 mg.; bottles of 60. Tao for Oral Suspension—1.5 Gm.; 125 mg. per teaspoonful (5 cc.) when reconstituted; unusually palatable cherry flavor; 2 oz. bottle.

References: 1. English, A. R., and Fink, F. C.: Antibiotics & Chemother. (Aug.) 1958. 2. English, A. R., and McBride, T. J.: Antibiotics & Chemother. (Aug.) 1958. 3. Wennersten, J. R.: Antibiotic Med. & Clin. Therapy (Aug.) 1958. 4. Celmer, W. D., et al.: Antibiotics Annual 1957-1958, New York, Medical Encyclopedia, Inc., 1958, p. 476.

Rx PFIZER NEW YORK 17, N. Y.

Division, Chas. Pfizer & Co., Inc. SCIENCE FOR THE WORLD'S WELL-BEING

*TRADEMARK

to relieve edema of

DIURIL® "...

CHLOROTHIAZIDE

FINNERTY, F. A., Buchholz, J. H. and Tuckman, J.: J.A.M.A. **166**:141, Jan. 11, 1958.

DIURIL (Chlorothiazide) given alone to 85 patients, ". . . caused an excellent diuresis, with reduction of edema, weight, blood pressure, and albuminuria. . . . The average effective dose was found to be 1 Gm. per day by mouth. . . . The usually excellent response coupled with the absence of significant toxicity and lack of development of drug resistance makes chlorothiazide ideal for the prevention and treatment of toxemia."

DOSAGE: one or two 500 mg. tablets of DIURIL once or twice a day.

SUPPLIED: 250 mg. and 500 mg. scored tablets DIURIL (chlorothiazide); bottles of 100 and 1,000.

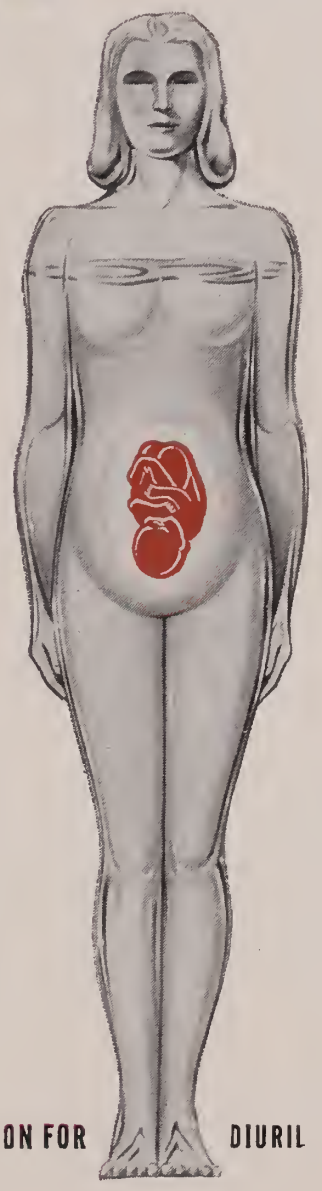
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pregnancy

.caused an excellent
diuresis, with
reduction of edema,
weight, blood pressure,
and albuminuria...."



ANY INDICATION FOR DIURESIS IS AN INDICATION FOR DIURIL

THE RATIONALE FOR THE USE OF VITAMINS IN FORESTALLING INFECTIONS

Many clinicians believe that good nutrition plays a significant role in preventing bacterial infections, and that immunity depends on adequate vitamin levels. Tisdall[1] states that "a low intake of a number of vitamins, a low intake of minerals, and a change in the quality of protein can all lower resistance to infection."

Other studies show the important role of the B vitamins in antibody formation. Thus, *Nutrition Reviews*[2] reports: "Present evidence indicates that certain B vitamins, notably pyridoxine, pantothenic acid and folacin, play a significant role in antibody synthesis." According to Pollack and Halpern,[3] "Under-nutrition leads to increased susceptibility to infection and decreased resistance to established disease." And "vitamin deficiency states also may adversely influence circulating antibodies."

Halpern[4] reports that "good nutrition is important for optimal resistance to infection, for a superior tissue capability to cope with disease and injury, and for maximum antibody production . . . nutrition participates in the prophylaxis against most acute infections . . ."

And while MacBryde[5] feels that evidence is lacking to support the view that a higher than normal intake of vitamins will improve resistance to infection, he also states: "Restoration of nutrition to normal exerts a favorable influence on practically all disease conditions . . . Often the outcome will depend more upon the correction of the malnutrition than upon any therapy directed toward the malady."

THERAGRAN

SQUIBB VITAMINS FOR THERAPY

now expanded to include additional essential vitamins—
and at no extra cost to your patients

Each Theragran Capsule supplies:

Vitamin A	25,000 U.S.P. units
Vitamin D	1,000 U.S.P. units
Thiamine Mononitrate	10 mg.
Riboflavin	10 mg.
Niacinamide	100 mg.
Ascorbic Acid	200 mg.
Pyridoxine Hydrochloride	5 mg.
Calcium Pantothenate	20 mg.
Vitamin B_{12} Activity Concentrate	5 mcg.

Dosage: 1 or more capsules daily as indicated.

Supply: Family Packs of 180. Bottles of 30, 60, 100 and 1,000.

Also Available: THERAGRAN Liquid, bottles of 4 ounces; THERAGRAN Junior bottles of 30 and 100 capsules; and THERAGRAN-M (Squibb Vitamin-Minerals for Therapy), bottles of 30, 60, 100 and 1,000 capsule-shaped tablets.

References: 1. Tisdall, F. F.: Clinical Nutrition, ed. by Joliffe, N.; Tisdall, F. F., and Cannon, P. R.: Paul B. Hoeber, Inc., New York, 1950, p. 748. 2. Nutrition Reviews, *15*:47, (Feb.) 1957. 3. Pollack, H., and Halpern, S. L.: Therapeutic Nutrition, National Academy of Sciences and National Research Council, Washington, D. C., 1952, p. 18. 4. Halpern, S. L.: Ann. N. Y. Acad. Science *63*:147, (Oct. 28) 1955. 5. MacBryde, C. N.: Signs and Symptoms, J. B. Lippincott Co., Phila., 3rd Ed. 1957, p. 818.

SQUIBB *Squibb Quality—The Priceless Ingredient*

'Theragran'® is a Squibb trademark.



"Much better–thank you, doctor"

Proven in research

1. Highest tetracycline serum levels
2. Most consistently elevated serum levels
3. Safe, physiologic potentiation (with a natural human metabolite)

And now in practice

4. More rapid clinical response
5. Unexcelled toleration

COSA-TETRACYN*

GLUCOSAMINE-POTENTIATED TETRACYCLINE

CAPSULES
(black and white)
250 mg., 125 mg.
(for pediatric or long-term therapy)

ORAL SUSPENSION
(orange-flavored)
125 mg. per tsp. (5 cc.)
2 oz. bottle

NEW! PEDIATRIC DROPS
(orange-flavored) 5 mg. per drop, calibrated dropper,
10 cc. bottle

COSA-TETRASTATIN*

glucosamine-potentiated tetracycline with nystatin

Antibacterial plus added protection against monilial super-infection

CAPSULES (black and pink) 250 mg. Cosa-Tetracyn (with 250,000 u. nystatin)

ORAL SUSPENSION 125 mg. per tsp. (5 cc.) Cosa-Tetracyn (with 125,000 u. nystatin), 2 oz. bottle

COSA-TETRACYDIN*

glucosamine-potentiated tetracycline-analgesic-antihistamine compound

For relief of symptoms and malaise of the common cold and prevention of secondary complications

CAPSULES (black and orange)—each capsule contains: Cosa-Tetracyn 125 mg.; phenacetin 120 mg.; caffeine 30 mg.; salicylamide 150 mg.; buclizine HCl 15 mg.

REFERENCES: 1. Carlozzi, M.: Antibiotic Med. & Clin. Therapy 5:146 (Feb.) 1958. 2. Welch, H.; Wright, W. W., and Staffa, A. W.: Antibiotic Med. & Clin. Therapy 5:52 (Jan.) 1958. 3. Marlow, A. A., and Bartlett, G. R.: Glucosamine and leukemia, Proc. Soc. Exp. Biol. & Med. 84:41, 1953. 4. Shalowitz, M.: Clin. Rev. 1:25 (April) 1958. 5. Nathan, L. A.: Arch. Pediat. 75:251 (June) 1958. 6. Cornbleet, T.; Chesrow, E., and Barsky, S.: Antibiotic Med. & Clin. Therapy 5:328 (May) 1958. 7. Stone, M. L.; Sedlis, A., Bamford, J., and Bradley, W.: Antibiotic Med. & Clin. Therapy 5:322 (May) 1958. 8. Harris, H.: Clin. Rev. 1:15 (July) 1958.

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in cases of tension

Serpate®

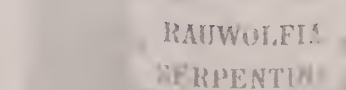
(Reserpine, Vale)

. . . the preferred drug where anxiety or emotional agitation must be controlled

. . . provides sedation without hypnosis, a sense of relaxed well being and tranquility

. . . effects a gradual and sustained lowering of elevated blood pressure in patients with mild, labile or essential hypertension

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. . . double assayed to insure optimal therapeutic effect

tested chemically to insure total alkaloid content

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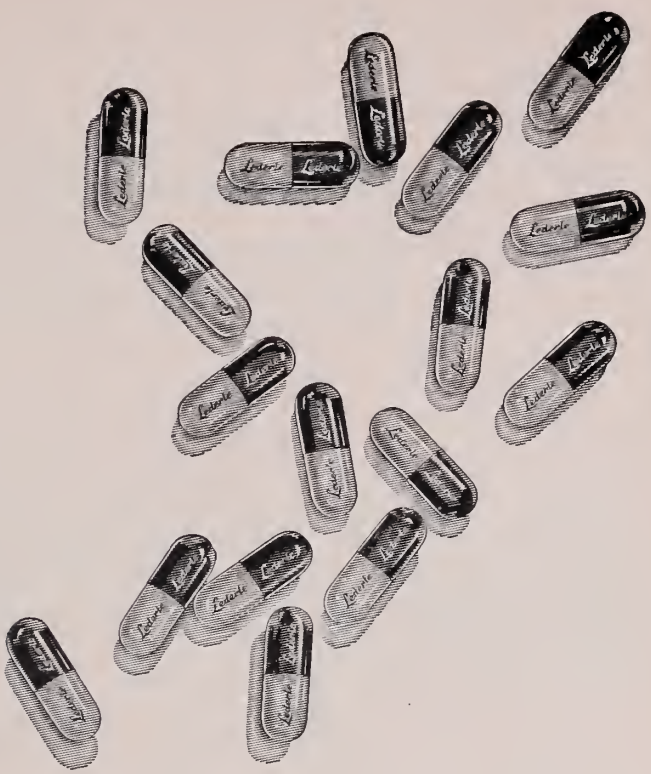
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REMEMBER THE V WHEN SPECIFYING ACHROMYCIN V. New blue and yellow capsules (sodium-free)—250 mg. with 250 mg. citric acid, and 100 mg., with 100 mg. citric acid.

ACHROMYCIN V dosage; Recommended basic oral dosage is 6-7 mg. per lb. body weight per day. In acute, severe infections often encountered in infants and children, the dose should be 12 mg. per lb. body weight per day. Dosage in the average adult should be 1 Gm. divided into four 250 mg. doses.

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Tetracycline HCl and Citric Acid Lederle

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nasal and paranasal congestion and control secondary invaders

Now, a single unique preparation, Trisulfaminic, can provide dramatic relief from congestion, and at the same time protect the patient from secondary bacterial invaders. Often within minutes of the first dose, congestion begins to clear; the patient can breathe again.

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Trisulfaminic *tablets and suspension*

TRIAMINIC PLUS TRIPLE SULFAS

Each Tablet and each 5 ml. teaspoonful of Suspension contains:

Triaminic®	25 mg.
(phenylpropanolamine HCl	12.5 mg.;
pheniramine maleate	6.25 mg.;
pyrilamine maleate	6.25 mg.)
Trisulfapyrimidines U.S.P.	0.5 Gm.

Dosage: Adults—2 to 4 tablets or teaspoonfuls initially, followed by 2 tablets or teaspoonfuls every 4 to 6 hours until the patient has been afebrile for 3 days. Children 8 to 12 years—2 tablets or teaspoonfuls initially, followed by 1 tablet or teaspoonful every 6 hours. Younger children—dosage in proportion.

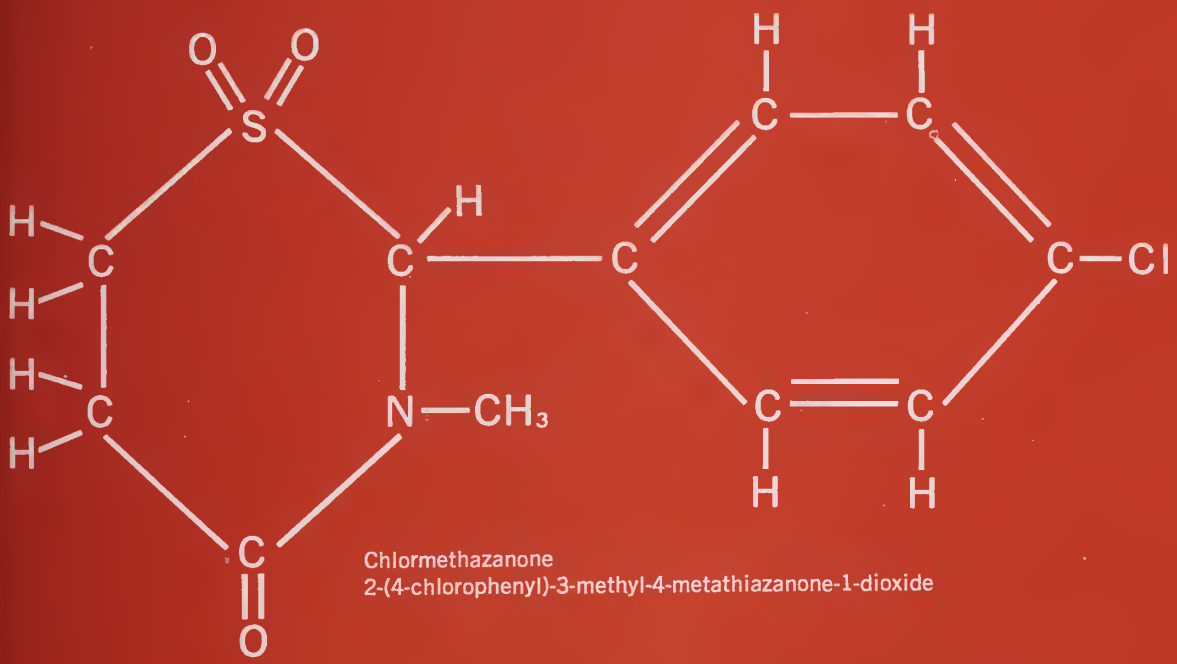
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a MUSCLE RELAXANT

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*the first true "TRANQUILAXANT"**

offering new freedom for your patients... from muscle spasm, from tension and anxiety, from side effects

* **tran-qui-lax-ant** (tran'kwi-lak'
[< L. tranquillus, quiet; L. laxa
loosen, as the muscles]

EXCEEDS OLDER DRUGS UP TO 4 TIMES IN PERCENTAGE OF CLINICAL EFFICACY (Lichtn

The results of clinical studies of over 4000 patients by 105 physicians demonstrate that TRANCOPAL often is effective w n other drugs have failed. From these studies it is clear that TRANCOPAL probably can provide more help for a greater numbe f tense, spastic, and/or emotionally upset patients than any other chemotherapeutic agent in current use.

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...the first true "tranquilaxant"

- a muscle relaxant and a calmative agent.
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CLINICAL RESULTS IN 4092 PATIENTS



MUSCULOSKELETAL CONDITIONS
2929 Patients

+



PSYCHOGENIC CONDITIONS
1163 Patients

=

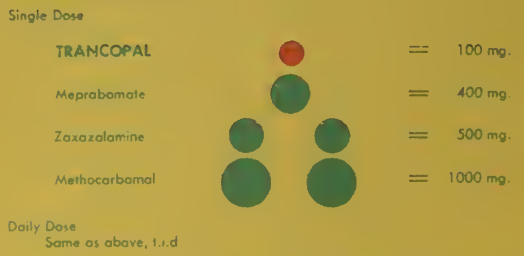


TOTAL 4092 Patients

MAJOR IMPROVEMENT
84%

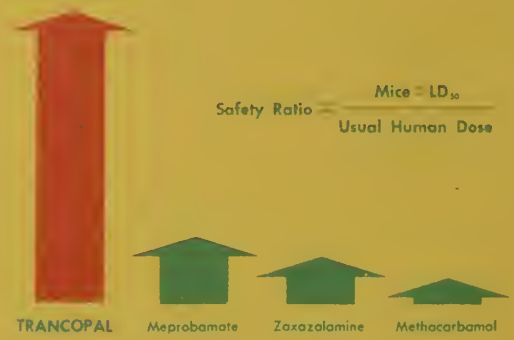
Compare Trancopal with 3 widely used central relaxants

FOR ACTIVITY



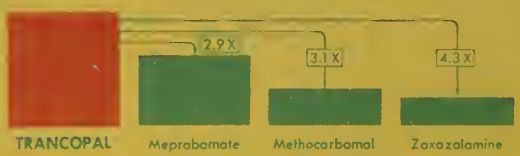
Considering the usual human dose, Trancopal, the first true "tranquilaxant," is four to ten times as potent per milligram.

FOR SAFETY



Comparative pharmacologic tests showed that Trancopal is up to thirteen times as safe, or up to thirteen times less toxic. The measure of safety was the LD_{50} in mice/usual human dose.

FOR CLINICAL EFFECTIVENESS



A clinical comparison in low back pain, torticollis, bursitis and anxiety states showed that Trancopal is up to four times as effective. Each of 40 patients received all four drugs in random rotation for several days. While each of the four drugs gave some relief, only the one providing the most effective relief was recorded.

INDICATIONS

Musculoskeletal
- Low back pain (lumbago)
- Neck pain (torticollis)
- Bursitis
- Rheumatoid arthritis
- Osteoarthritis
- Disc syndrome
- Fibrositis
- Joint disorders (ankle sprain, tennis elbow, etc.)
- Myositis
- Postoperative myalgias

Psychogenic
- Anxiety and tension states
- Dysmenorrhea
- Premenstrual tension
- Asthma
- Emphysema
- Angina

Neurologic
- Muscle spasm in paralysis agitans, multiple sclerosis, hemiplegia, poliomyelitis

TRANCOPAL thoroughly evaluated clinically

"In the treatment of conditions associated with skeletal muscle spasm there was a high percentage of satisfactory results (excellent, good or fair) in 310 patients (94%) out of 331 treated . . . In 120 patients with simple anxiety or tension states results were satisfactory in 114 (95%). Dosage of chlormethazanone in all cases was 100 mg. t.i.d. As well as relieving the anxiety or tension state, chlormethazanone also allowed these patients to resume their usual occupations." (Lichtman)

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the first true "TRANQUILAXANT"

Dosage: One Caplet (100 mg.) orally three or four times daily. Relief of symptoms occurs in fifteen to thirty minutes and lasts from four to six hours.

Supplied: Trancopal Caplets® (scored) 100 mg., bottles of 100.

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• Baker, A. B.: Modern Med. 26:140, April 15, 1958. • Cohen, A. I.: In preparation. • Cooper, G. Study, Department of Medical Research, Winthrop Laboratories. • Gesler, R. M., and Coulston, F. Toxicol. & Appl. Pharmacol. To be published. • Gesler, R. M., and Surrey, A. R.: J. Pharmacol. & Exper. Therap. 122:24A, Jan., 1958. • Gesler, R. M., and Surrey, A. R.: J. Pharmacol. & Exper. Therap. 122:517, April, 1958. • Lichtman, A. L.: Kentucky Acad. Gen. Pract. J. 4:28, Oct., 1958. • Surrey, A. R.; Webb, W. G., and Gesler, R. M.: J. Am. Chem. Soc. 80:3469, July 5, 1958.

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*U.S. PAT. NO. 2,441,498 MADE IN U.S.A.

fyou were to examine these patients



could you detect the uveitis patient on Medrol*?

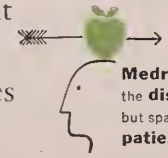
Probably not. Not without a history.

First, because he's more than likely symptom-free.

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But in your own patients, you could see the advantages of Medrol right away. Why not try it?



Medrol hits the **disease,** but spares the **patient**

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Joint inflammation and muscle spasm are the two elements most responsible for disability in rheumatic-arthritic disorders—and MEPROLONE is the one agent that treats both.

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Because muscles move joints both muscle spasm and joint inflammation must be considered in treating the rheumatic-arthritic patient . . .



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MEPROLONE is the one antirheumatic-antiarthritic that exerts a simultaneous action to relax muscles in spasm and to suppress joint inflammation...

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because all patients show therapeutic blood concentrations of penicillin with recommended dosages.

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of the bacteria-destroying antibiotic. Within five to fifteen minutes after administration, therapeutic concentrations appear in the general circulation.

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than with any other penicillin given orally. Bactericidal concentrations are assured. Infections resolve rapidly.

Dosage: 125 or 250 mg. three times daily.

Supplied: Tablets, scored, of 125 and 250 mg. (200,000 and 400,000 units).

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The Virginia
MEDICAL
MONTHLY

December, 1958

Vol. 85, No. 12
Whole No. 1279

Guest Editorial....

States Rights in Hospitals

THERE has long been widespread dissatisfaction with many of the rulings of the Joint Commission on Accreditation of Hospitals. Undoubtedly the Hospital Standardization Program started by the American College of Surgeons in 1920, with the object of creating "in the hospital an environment which will assure the best possible care of the patient", did a lot to improve the standards of hospitals throughout the country. Certainly there were hospitals which needed policing. Just as certainly there were many hospitals which were superior and did not need policing. The work of the American College of Surgeons was taken over in December 1951 by the Joint Commission.

It is felt by many that the Joint Commission, instead of consolidating the gains made by the American College of Surgeons, has increased the number of regulations and technical minutiae to an intolerable extent, thereby working hardships on many of our very best hospitals. As an example, one of Baltimore's best hospitals recently after an inspection by a representative of the Joint Commission had its accreditation extended for only one year instead of for the customary three years. One of the principal reasons given for this ruling had to do with stairwells and fire hazards. Yet the hospital had regularly passed inspection by the Baltimore Fire Department and had one of the lowest fire insurance rates obtainable. The question of the fine patient care uniformly maintained in this fine hospital was apparently not even considered. Yet such a ruling makes it difficult for this hospital to get interns now, when at one time it had many more applicants for internships than there were places.

Most of the objections to the rulings of the Joint Commission have hitherto been voiced in doctors' cloak rooms. Very few have appeared in print. In a recent issue of Current Medical Digest (June 1958, p. 63) your guest editor made bold to put some of the criticisms often heard in cloak rooms on the printed page. The result was an avalanche of letters of approval from all parts of the country. They wrote that their sentiments had been voiced. They said that the number of meetings required by the Joint Commission was preposterous and out of proportion to the amount of new and important material at hand. One wrote that the query "'Is private practice then to be controlled by a group of non-practitioners?' would have been more timely fifteen years ago. Non-practitioners are *now* in control of most medical institutions. They are, therefore, in control of all medical disciplines."

But must they necessarily stay so? It is true that there is a deplorable trend in our country towards the centralization of government. Dicta are being handed down from Washington which are obnoxious to a large segment of our people. Federal bureaucrats are running roughshod over every principle of sound government and of common decency. If they ever knew that local self-government is the foundation stone of democracy, they have either forgotten it or treat it with the utmost contempt.

Are we then also to have centralized control of the practice of medicine? What has become of the principle of states rights, of local self-government, and of the dignity of the individual?

Quite naturally all of us want our hospitals to have high standards and the PATIENT, who is the central figure, to have the best possible care. Many of the requirements of the Joint Commission actually militate against this by taking up the doctor's time in annoying, irritating, and unnecessary paper work as well as in unnecessary meetings. The Stover Report (J.A.M.A., 162, 499, 1956) stated that attendance requirements at staff meetings should be set up locally and not by the Commission. This recommendation of reverting to local self-government was ignored by the Commission.

Recently the House of Delegates of the Medical and Chirurgical Faculty of the State of Maryland passed a resolution stating that the presently existing methods of approving and disapproving hospitals for accreditation adversely affect the potentialities and effectiveness of such institutions generally and the patient, interne, and visiting physicians associated with such hospitals specifically. (A copy of this resolution is to be sent to the Joint Commission and to all State medical societies.) Shortly afterwards the Maryland Chapter of the American College of Surgeons took similar action. Certainly when there is such a complete lack of rapport between fine physicians and the Joint Commission, there is something wrong, and I do not believe that the trouble is with the doctors who run the hospitals.

Now, what to do about it. The obvious thing seems to be for all the states to follow the example of Maryland in a grassroots revolt against centralization. If we are to have a central accrediting body, a local committee should advise them with regard to local hospitals. We can, and should, stop the present system of having inspectors, who are often of nothing like the caliber of the staff physicians concerned, pass upon accreditation or non-accreditation of hospitals staffed by doctors who are far more competent than they are.

Amos R. Koontz, M.D.

1014 St. Paul Street
Baltimore, Maryland

Some Problems We Face

HARRY C. BATES, Jr., M.D.
Arlington, Virginia

MANY of your recent past presidents have discussed the problems of our profession from this rostrum. I would enjoy nothing more than doing the opposite—standing up here and smiling in a benign fashion, telling you about all the nice, pleasant, cheerful things that have happened this year, such as the fine job so many of you have done, the construction of our beautiful new headquarters, our cooperative conjunction with the legal profession, our continuing good financial progress and our numerically improving membership.

These are important things, progressive things, things of which we all can be proud. But they are not the things I want to spend this last little time I have with you in talking about.

In going about my duties for you this year past I have learned a great deal. No one can be exposed to this position without seeing and hearing and learning many things, and if I complete my job the way I think it should be done, then what I have learned that could be of benefit to this organization should be passed on to it now.

One of the most important things that I have noticed this year is that there aren't enough young physicians coming along in practice. Several things point to this. It is evident that many of us work too hard, take too little time off, and often suffer serious consequences. We need more help. But more important than our personal needs are the needs of the public. With all the graduates American medical schools are turning out, plus a large annual flow of foreign trained doctors, many of our hospitals are understaffed. There are indications that the number of those coming from foreign countries may be sharply curtailed because many of them seem unable to pass the required tests. If a hospital is understaffed the young staff doctors are usually overworked. This in turn makes it difficult for them to meet the required didactic program to keep the hospital accredited, and if this program falls down the hospital loses its recognition as a teaching institution and is unable to attract more interns and residents in future years. We must make a severe effort to keep more of the graduates of our own two medical schools here in Virginia.

It is also apparent that American medicine, as it is functioning today, is not producing anywhere near enough medical graduates. I know there is a difference of opinion on this and we are repeatedly given statistics to refute such a statement. Purely aside from the numerical ratio of doctors to patients, we must consider the expanding medical education of the American public during the past decade or two. Our patients have been told what constitutes good medical care and how much more of it is needed now than in the past. The public is demanding more and more medical care per individual. And while this is good for all concerned, there may come a point at which quality medical care gives way to quantity medical care. This I don't want to see. I believe American medicine should get on with more medical training and soon. If the schools we now have are filled to their capacity, then we must have more schools, or some new and untried methods of training must be attempted. I know there are many physical and financial problems involved in organizing a good school of medicine, and in obtaining candidates for it. I cannot believe that the ingenuity and resources of this nation have reached the point where such an undertaking is impossible. It is Medicine's duty to see that this is done.

Day in and day out the medical profession does inestimable good. We all know that. We're there and we see it happen. It is unbecoming for us to call attention to it, and really we shouldn't have to, because good that is evident should speak for itself. The people we take care of see it also and recognize it, or at least recognize the fact that we are trying to do as much as we are able for them. Surveys indicate that patients feel their own physicians are on their side. But for some strange reason there is a question about whether the medical profession is *also* on their side. This makes me wonder if we are all looked on as having split personalities.

Perhaps this situation is tied in with the statement that we have heard that three per cent of the medical group create trouble for the other 97 per

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Presidential Address delivered at the Annual Meeting of The Medical Society of Virginia, Richmond, October 12-14, 1958.

cent by doing things they shouldn't. I don't know about this figure of three per cent. Maybe it's a little more, maybe a little less. The percentage is not very high, but the facts *are* very important. If we have among us an unconscienciable few who go about turning the public against us, we must somehow gain the ability and strength to rid ourselves of them. We have made some progress in this. Most areas have established grievance committees for the individual who is aggrieved at an action of one of our members. We have review committees for all the various third party schemes in which we are forced to participate to help control and adjudicate questions of charging and paying. But because of the fear of excessive reaction by the public if told of such available bodies, these safeguards to our system have been kept under wraps with only half-hearted peek-a-boo publicity allowed. How can we let the public know we're trying to give them a square deal unless we show them how it works, and that it is available to everyone. I say let's quit ballyhooing only the scientific advances of medicine and start talking up some of the other aspects.

Another important point which I think is undermining our position is American medicine's failure to educate the public into the whys and wherefores of our medical ethics. This may be the reason for a great deal of our trouble. You and I know that faulty ethics are evident sometimes, or rather that correct ethics are not always practiced even by those who know better. Too many of us fail to go back and review our Ethics as often as we should. I am not even sure we are properly taught Ethics as we go through medical school and post-graduate training. I have known this subject to be relegated to a few odd hours, slipped in at the end of the day's lectures without the benefit of a roll call and with the student's conscience as the only incentive to his attendance. Nearly all of the individual problems of the Art of Medicine can be answered by our Ethics. A great many of the business problems of every-day practice can be solved here also. Actually, our Principles of Ethics should be second only to the Bible in governing our practice of Medicine. A great many of the problems we find ourselves beset with today come from a failure on our part to live up to the spirit and concepts of our Ethics.

Re-education of ourselves and education of the public regarding these important Principles could go a long way in helping the situation. Their basic function is to assure that the patient is treated well and fairly. They are as sound and valuable as the Golden Rule. I honestly believe we could help the public and the profession immeasurably by fostering a better understanding of our Ethical Principles.

In many parts of our country, various groups or organizations have seen fit to object to the way we care for and charge their members. They advocate limited or closed panels of physicians and surgeons and claim that as a consequence they can effect marked savings for their constituents. Since its inception we have looked on this with distaste and distrust, believing that it interferes with the patient's free choice of his physician and perhaps could bring him inferior medical care. *If* the claims made by these organizations can be substantiated, if their fees paid are reasonable and proper for the care given, and if the care given is of good quality, then their contentions may very well have merit. Our arguments must be made without a pre-formed or biased attitude just as we should not be biased by outside influences in the medical treatment of a case.

There are some factors we must take into account in solving this problem. In many cases the fight against what we think is right is being led by members of the medical profession. Unfortunately many of these have never practiced a single day of private medicine and understand very little of it. Some of them have existed for many years in command positions, handing down decisions that could not be questioned by their staff members. Some of them have exhibited very poor judgment in their contacts with the practicing physicians, and have done little if anything to effect an understanding. The groups they represent are often of a militant nature and have developed techniques for forcing their desires on others. Many of the things they have demanded have been for their betterment and were judicious moves on their part. I believe these people are just as entitled to good medical care as are any other group. But I do not believe that medicine, or doctors, should be coerced into poor quality care or into inadequate payment, for the latter will almost certainly spawn the former, and the former is a wedge to enforce the latter. We have not seen the end of this bitter debate. We must begin the education of our young physicians on this subject very early, perhaps in medical school, for it has been hinted that the ranks of the interns and residents may be raided, with fantastic offers, to catch them young and train them for closed-panel careers. Let us get on the ball.

Another soft spot in our armor is the several hundred physicians in Virginia who are not members of our Society. They are weak links in our

chain. Few of them can object financially, because we have the lowest dues in the United States. Our Society really requires very little of its members unless they wish to offer their services. If we should be called on to present a strong, united front in facing up to our many problems, then we should have the support and active membership of many more Virginia doctors.

Finally, I believe that we, as a group, are going to have to rearrange some of our ideas. It has become more and more evident that those people, who have spoken for medicine in the past and have formulated the policies on which American medicine has operated, have resented a great many of the changes that have been forced on us. There has been a great tendency to keep things as they are. This soon becomes a tendency to keep things as father had them, then as grandfather had them, and so forth. It isn't difficult to understand this. For one thing, American physicians have gradually raised their standards and their social and financial status to a relatively high level. Any sharp change in the status quo might possibly rock the boat. This could produce very unpopular results and while harming the physicians, might also allow lowering of standards with consequent inferior medicine. Another factor may be the almost necessary fact that those who speak as spokesmen and who serve in high offices of American medicine are older, more conservative, leaders whose philosophy hardens, demanding a more rigid pattern. This isn't all bad. These men have the experience and the judgment that can only be acquired with time. These are factors which are absolutely indispensable and which any successful organization must have. But there must be a realization of certain facts of life. There are violent and severe changes going on right now in many phases of our lives. Sociologically, politically, financially, industrially, and in virtually every other fragment of our existence one can mention, vast changes are occurring daily. We hardly settle on one pattern before another is thrust under us and we must adjust to it. This is not a Virginia revolution, or an American revolution, though both of these are going along concurrently. This is a world-wide upheaval that may go on for decades. Communism, in its drive to upset all established patterns, doesn't care how long it takes. The longer anarchy prevails the weaker the opponents grow. As long as the socialistic idealism finally succeeds, it doesn't matter how many Stalins or Khruschevs are necessary.

Therefore, American medicine has to start tempering its experience and judgment with new ideas and daring, with a willingness to produce changes in itself, with a reappraisal of its role in the scheme of things. We must have more and better contacts with medicine in other countries so that our way of life can be better understood. We must devise ways and means to produce more and cheaper care for the indigent and the aged, because they are going to get this care whether we arrange it voluntarily or involuntarily. Hospitalization is pricing itself higher and higher. Organized medicine, or socialistic government, will ultimately rearrange this. I am sure that a little thought will bring to mind other areas in which improvement can be made. We may have to sacrifice the fat in order to enjoy the lean. We need more minds, better cooperation, new ideas. We haven't reached the end of the line yet. As a matter of fact, we may only now be coming to the main line.

For your sake and my sake, and most of all for the sake of our patients, I sincerely hope so.

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Poisoning Due To Antifreeze

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WITH THE ARRIVAL OF WINTER, the public again will be using and will be exposed to automobile antifreeze preparations. The two most commonly used antifreeze products (with whatever trade names they might have) contain:

temporary type—methyl alcohol.

permanent type—ethylene glycol.

Methyl alcohol or ethylene glycol are both quite toxic if taken internally, but much can be done to forestall death if there is early recognition of the poisoning and proper treatment instituted.

Each of these agents produce metabolites in the body which are even more toxic than their precursor.

METHYL ALCOHOL
CH_3OH

Synonyms: Wood alcohol, denatured alcohol, methanol.

Uses: Fuel, industry, solvent, denaturant, antifreeze, manufacture of formaldehyde and formic acid, etc.

Properties: Colorless liquid, odorous, volatile, B. P. 64.7° C.

Minimum lethal dose: Approximately 75 ml./ 150 lb. man.

Remarks: Methyl alcohol is particularly toxic because of its cumulative action which seems to be associated with its metabolites formic acid and formaldehyde. Methyl alcohol is rapidly absorbed through all portals and may still be found in the tissues and urine 48 hours after ingestion. Elimination (detoxication and excretion) takes about 5 to 10 times longer than ethyl alcohol. Death may occur within 5 hours; more usually it is delayed several days.

Symptoms: Initially similar to those produced by ethyl alcohol. However the metabolites (formaldehyde and formic acid) produce more serious symptoms such as severe acidosis, strong odor on breath, retrobulbar neuritis, tinnitus, clouded sensorium, abdominal pains, nausea, vomiting, severe headache (cerebral edema), delirium, dyspnea, cyanosis, temporary or permanent optic nerve damage, blindness, coma, respiratory, and/or circulatory failure.

Treatment: Immediate gastric lavage with sodium bircarbonate, emetics for quick evacuation, IF PATIENT IS NOT COMATOSE. Cathartics such as sodium sulfate (15 gm.). Keep patient warm and quiet, protect eyes from strong light; maintain electrolyte and water balance. Acidosis is to be prevented or abated if treatment is to be successful. The carbon dioxide combining power should be initially determined and then repeated at intervals to evaluate treatment and response.

Sodium bicarbonate IV slowly (5% solution 3 ml./ Kg) until acidosis is abated. Sodium lactate may also be used. Treatment with bicarbonate should be continued for several days, with careful evaluation.

Hemodialysis (artificial kidney) if available would materially hasten elimination of both methyl alcohol and formic acid.

5 to 20 ml. of ethyl alcohol every 2 to 4 hours may help inhibit conversion of methyl alcohol to the more toxic formaldehyde and formic acid.

Supportive measures such as oxygen therapy and artificial respiration as needed, glucose and fluids, B_1 for visual disturbances, antibiotics prophylactically if patient is comatose; prevent or combat collapse and shock.

Identification: (1) in blood, urine or steam distillate, etc.

Four ml. of trichloracetic acid (20%) is added to 2 ml. of blood and shaken in order to precipitate the proteins. Filter the solution through Whatman #42 filter paper. To 0.1 ml. of the filtrate add 1 drop of potassium permanganate. (1.5 gm. potassium permanganate and 7.5 ml. or phosphoric acid

From the Office of the Chief Medical Examiner, Department of Health, Commonwealth of Virginia.

(85%) is dissolved and diluted to 50 ml. of water. Store in brown bottle.)

Let the solution stand for 1 minute (exactly). Decolorize with a pinch of sodium bisulfite, and then add a pinch of chromotropic acid (E. K. #P1613). Add 3 ml. of sulfuric acid and SHAKE ⟶ purple color, which is directly proportional to concentration. Allow the color to fully develop for 20 minutes, and read at 570 mu with a Beckman DU, 1 c.m. (spectrophotometer) using sulfuric acid as a reference blank (calibration curve below.) This is specific for formaldehyde and for methyl alcohol if the latter is first oxidized with $KMnO_4$.

Gms. % Methyl Alcohol	Transmission
0.025%	60% T
0.050%	40% T
0.075%	28% T
0.100%	18% T

(2) Identified in the volatile-steam distillate separation, it is soluble in water, has a characteristic odor; B.P. 64.7°C.

(3) Into 10 ml. of distillate, plunge a red hot copper spiral 8 times.

(a) To 5 ml. of this oxidized solution add 10 drops 5% phenylhydrazine hydrochloride and then 2 drops of 0.5% sodium nitroprusside and then 10 drops 20% sodium hydrocloride. Blue ⟶ green ⟶ yellow ⟶ *red-violet* color indicates the presence of formaldehyde (oxidized methyl alcohol).

(b) To 5 ml. of this oxidized solution, add 2 ml. of sulfuric acid and 5 ml. of fuchsine solution. A violet color is developed in a couple of minutes. This color can be quantitated.

Fuchsine Solution: 0.2 gm. of basic fuchsine is added to 150 ml. of boiling water. Dissolve, and then cool with running water. 2 gm. of sodium bisulfite (meta) in 20 ml. of water is added and mixed. Then add 2 ml. of hydrochloric acid and 60 ml. of water. Mix and store in a glass stoppered dark bottle. This solution should be stored in a refrigerator and will be stable for several months.

ETHYLENE GLYCOL

$C_2H_6O_2$

Synonyms: Antifreeze, permanent antifreeze.

Uses: Auto antifreeze, solvent, coolant, industry.

Properties: Colorless, odorless liquid, B. P. 197.5°C., miscible with water and alcohol, non-volatile, bitter sweet but pleasant taste. No hazard by inhalation or skin absorption.

MLD: Approximately 100 ml. for 150 lb. man.

Remarks: Twice as toxic as propylene glycol. Half as toxic as diethylene glycol. Metabolizes to oxalic acid in the body.

Symptoms:

Immediate: (1-2 hours): Nausea, vomiting, abdominal pain, diarrhea, warmth in throat, mouth and stomach. Signs similar to alcoholic intoxication; restlessness, irritability, talkativeness, ataxia, increase in pulse rate; depression, dyspnea.

Three to twelve hours: Deep depression, coma, increase pulse and respiratory rate, rise in blood pressure (systolic and diastolic), generally an absence of reflexes; oliguria, capillary damage, hematuria, acidosis, convulsions, hemorrhages in pleura, lungs, heart, kidney and brain; anuria, hemorrhagic nephrosis, calcium oxalate crystals in kidney tubules, urine. Ethylene glycol is distributed evenly in body, some formaldehyde may be found in urine in small amounts. Within two hours prior to death, rales may appear in both lung bases and the patient may expire from pulmonary edema; death usually occurs within 12-36 hours following ingestion. It is controversial whether death is due to oxalate poisoning, or paralysis of respiration and/or circulatory failure. It is probably due to a combination of these factors.

Delayed: Clinical appearance of an acute nephritis-like state; hypertension; signs of renal insufficiency and uremia which may terminate in death.

In all stages, the carbon dioxide combining power is low. However, the most characteristic findings are the large amounts of oxalate crystals found in the urine.

Identification: Samples of choice are vomitus, gastric lavage or residue of suspected fluid.

Urine will contain the metabolite as the oxalate. In spite of the fact that ethylene glycol is relatively non-volatile, it can be separated by steam distillation employing reduced pressure.

(1) To 20 ml. of distillate add 5 ml. of a dichromate solution ⟶ solution turns green-blue on standing (nonspecific). Dichromate Reagent: 1% potassium dichromate in 50% sulfuric acid.

(2) Separate ethylene glycol from vomitus, gastric lavage or stomach contents by distilling in vacuo and identify by boiling point and derivatives. 3, 5, dinitro benzoyl derivative, M.P. 160°C.

(3) Kidney function tests may be of presumptive value.

(4) Test for formaldehyde and/or oxalates in the urine.

(5) *Fuchsine test:* (Harger and Forney):
Sulfuric acid, 2/3N.

Sodium tungstate, 10%.

Periodic acid, M/10. Dissolve 2.28 gm. of (H_5IO_6) periodic acid or 2.13 gm. of $NaIO_4$ in 100 ml. of 1/3N sulfuric acid.

Fuchsine reagent: See under methyl alcohol.

Procedure for blood.

Take 1 ml. of blood with 7 ml. of water and add 1 ml. of the tungstate solution. With vigorous shaking, add dropwise, 1 ml. of the sulfuric acid solution. Stopper the flask and shake well. Filter through a small dry filter paper.

Place in a small test tube 1 ml. of the protein-free filtrate and then 4 ml. of water. Next add 0.25 ml. of the M/10 periodic acid solution and shake. Allow to stand 10 minutes. Quickly introduce 2 ml. of the Fuchsine reagent and mix ⟶ violet. The color is allowed to fully develop and after 25 minutes read the depth of color with a photoelectric colorimeter set at wave length 555 mu. Compare the result with the optical density curve for standards of 10 to 50 micrograms of ethylene glycol dissolved in water and run in the same way. With quantities above 30 micrograms the final solution must be diluted 2 to 3-fold. If the color is still too strong, repeat the analysis with less of the protein free filtrate. Run a blank with distilled water.

Remarks: Blanks may give results up to 30 mg %; but a POSITIVE case (within 8 hours of exposure) will give levels *at least* 10 times this value.

Treatment: Gastric lavage, enemas, liberal administration of alkalies and fluids; sodium bicarbonate IV or sodium lactate M/6 IV for acidosis; saline cathartics, sodium sulfate (15 gm.); short acting barbiturates for convulsions. Oxygen therapy and artificial respiration as needed. Maintain body heat, body fluids, and electrolyte balance.

Treat for kidney damage in usual manner. Hemodialysis (artificial kidney) if available will hasten elimination.

Support respiration and cardiovascular irregularities.

Renal function tests will indicate progress of patient and treatment.

NOTE: This is one of "Seasonal" articles on poisoning which will be published in the Monthly from time to time. It is prepared by Dr. Kaye in collaboration with the Richmond Poison Information Center.

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Richmond, Virginia

A.M.A. Remodeling Job

Dr. F. J. L. Blasingame, executive vice president, has announced that the American Medical Association, largest medical organization in the world with 171,000 physician members, has contracted for a $2,000,000 modernization program of its headquarters building at 535 N. Dearborn St., Chicago. The building, on the northeast corner of Dearborn Street and Grand Avenue, is the hub of the A.M.A.'s professional and public services and houses a staff of 650.

The contract calls for installation of new lobbies, entrances, air conditioning and automatic elevators, and for complete modernization of all corridors and offices, with dropped acoustic ceilings, fluorescent lighting, new flooring, new walnut paneling and glass partitions. The job will require 24 months and will provide adequate meeting space and restaurant facilities for employees and visiting physician members.

The A.M.A. has occupied its present site, with many expansions, since March 1902, when it purchased its first piece of land, 100 feet on Dearborn Street and 80 feet on Grand Avenue, then known as Indiana Street, for $42,000. On this plot were five rather old two-story and basement buildings. They were torn down and a new three-story brick and stone building was erected at a cost of $35,000. More adjacent ground was purchased in June 1903 and shortly after that additions to the building were made.

The present structure, including a small auditorium, was completed in 1937, with a six-floor addition made in 1947.

The Use of Triamcinolone (Aristocort) in Dermatology

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ARISTOCORT* (triamcinolone) is a steroid hormone and shares the anti-inflammatory, hormonal, and metabolic advantages of this group of hormones. Unfortunately, it also shares some of the group disadvantages which have limited the usefulness of these hormones. However, many of these side reactions have either been eliminated or sufficiently modified to warrant further study of this particular steroid.[1]

Systemic administration of Aristocort is not accompanied by sodium retention or increased potassium excretion. In fact, sodium diureses is not unusual and edema due to sodium retention of previous hormonal therapy often disappears with the substitution of equivalent doses of Aristocort. There is no appreciable calcium, nitrogen or phosphorus excretion on the usual doses, although extremely high doses (50 mgm. or more daily) may result in excretion of these elements. While most patients show normal fasting blood sugar readings, there is a mild diabetogenic tendency which can be discovered by performance of glucose tolerance curves. The incidence of peptic ulcer, osteoporosis, and psychic manifestations is very low. Peptic ulcer occurring with the use of other steroids has been known to heal when Aristocort was substituted.

In the present series moon facies developed in a fairly high percentage of cases on prolonged therapy. Minor reactions noted were flushing, headache, sleepiness, weakness, dizziness, easy bruisability, hyperhidrosis, hypertrichosis, and urinary frequency. One other interesting reaction noted in a fairly high percentage of cases was weight loss associated usually, but not always, with diminished appetite. This tended to stabilize after several weeks of therapy. The weight loss of a few patients was as much as 20%.

Intercurrent respiratory infections occurred in four of the total cases, in only one severe enough to require hospitalization. One patient developed cellulitis of the thigh and leg in association with thrombophlebitis but another with recurrent axillary furunculosis of many years duration exhibited no flare while under prolonged therapy. Whether these infectious episodes represented heightened susceptibility to infection or the norm in a winter of high respiratory and bacterial infections remains to be determined.

The dermatologic indications for the use of this group of hormones are by no means generally agreed upon, even in situations where they are known to be effective. However, as side reactions are eliminated if possible, their use may be extended. Whether these undesirable reactions will ever be completely eliminated while therapeutic effectiveness is still maintained or increased is a matter of speculation. The cases herein reported were selected for study only after other therapeusis had failed and because the condition was of sufficient severity to warrant the use of the hormone.

Before treatment was introduced the patient was warned of possible reactions, that therapeusis would be suppressive but not curative, that he should be content with significant improvement but not complete suppression of signs or symptoms, that the length of time therapy would have to be continued could not be predicted (although a guess could be hazarded on the basis of the usual natural course of the disease), and that treatment would be relatively expensive. The usual initial dose was 16 to 20 mgm. per day. The dose was then readjusted to maintenance, usually within two to four weeks. With these facts in mind, patients as shown in the table were treated.

Probably the most interesting therapeutic response was noted in cases of psoriasis.[2] Only those with widespread involvement were included in the study. Most of these had either "given up" treatment or had about exhausted the usual gamut of therapy prescribed previously by a minimum of two dermatologists of competence. All of these patients were highly skeptical and accepted treatment only because they were "grasping" or had been referred by another psoriatic enthusiastic about his response to Aristocort.

*Drug supplied through the courtesy of American Cyanamid Company, Lederle Division.

TABLE

Diagnosis	No. of Cases	Maintenance Dose	Results (No. of Cases)			
			Excellent	Good	Fair	Poor
Atopic eczema	8	4–8 mgm.	6	1	1	..
Infantile eczema	1	4 mgm.	1	..	..	..
Alopecia areata (severe)	4	6–12 mgm.	3	..	..	1
Psoriasis†	15	4–12 mgm.	8	5	2	..
Contact dermatitis	5	16–0 mgm.	5	..	..	..
Urticaria (cause unknown)	1	12 mgm.*	..	1	..	..
Erythema multiforme						
Due to penicillin	2	12 mgm.*	..	1	1	..
Due to "666"	1	12–0 mgm.	1	..	..	..
"Idiopathic"	4	12 mgm.*	1	1	..	2
Pemphigus, chronic	1	8 mgm.*	1	..	..	..
Intertrigo (severe)	2	12–0 mgm.	1	1	..	..
Nummular eczema	1		..	1	..	..
Darier's disease	1	16 mgm.	..	..	..	1

*Exacerbation on lower doses.
†Suppression: excellent = 70% or better; good = 40% to 70%; fair 20% to 40%; poor = no effect.

As a rule, those cases who were to achieve the best results showed a suppressive effect of 70% or more within one week on divided doses of 20 mgm. per day. Usually, thereafter the maintenance dose was gradually reduced over a period of two to four weeks to 4 to 8 mgm. per day. Those who obtained only fair initial suppression on 20 mgm. per day (40% or less) were usually not able to reduce their maintenance dose below 12 mgm. per day without recurrence. Few if any new lesions appeared after one week of therapy. When good initial suppressive effect was obtained. Further involution was noted even though the dose was further reduced. In two cases in which satisfactory suppressive effect was achieved on 4 to 8 mgm. per day the drug was discontinued but psoriatic lesions reappeared in seven to ten days. Suppression was again obtained by the usual maintenance dose. Only one patient voluntarily stopped treatment because she felt there was insufficient response. Also, it can be anticipated that due to the natural course of exacerbation and remission in psoriasis that there will be periods of time during which the medication can be eliminated. Such was true in one case in which the medication was eliminated for eight weeks before significant relapse.

One psoriatic with arthritis whose joint pains were controlled by 15 mgm. of prednisolone per day without any appreciable effect on her extensive psoriasis of over twelve years duration achieved excellent suppressive effect of the eruption on equivalent doses (12 mgm. per day) of Aristocort which also controlled the pain. Two psoriatics required an increase in their maintenance dose after adequate suppression for two months: one from 6 mgm. to 8 mgm. per day, and the other from 6 mgm. to 16 mgm. before his exacerbation could be controlled. The maintenance dose was then gradually reduced to 8 mgm. per day.

The results in patients with alopecia areata or totalis deserve amplification. No appreciable effect of therapy was noted until three or four weeks after treatment was begun. If by the fourth week no growth of hair was apparent, the dose was adjusted upward.

In three cases a satisfactory reversal of the hair loss was noted on doses of 16 mgm. per day and the hair growth was maintained in one of them on doses of 6 mgm. per day. Two were able to discontinue treatment without hair loss for an observational period of two months with recurrence thereafter. New hair growth was obtained on doses of 8 mgm. per day in both instances.

The fourth case was started on 12 mgm. per day with no effect in four weeks, at which time the dose was raised to 20 mgm. per day. She continued to lose the remainder of her hair but after four weeks of this dose re-growth was apparent. The dose was reduced over a two week period to 12 mgm. per day. After four weeks the hair began to fall out again. This case was deemed a failure since it was felt that a minimum maintenance dose of 16 mgm. was too high for safe administration over an indefinite period of time.

The suppressive effects in other dermatologic entities are comparable to those obtained with the use of other steroids and with approximately the same dosage.[3]. However, the lower incidence of side reactions favors the use of triamcinolone over the

other members of this group of hormones. To date treatment was permanently stopped only in those cases in which the natural course of the disease tended toward involution and suppressive treatment with doses from 4 to 12 mgm. per day have been continued for periods up to six months with no serious clinical reactions.

SUMMARY AND CONCLUSIONS

1. Because of reduced side reactions, the use of triamcinolone represents a means of extending the usefulness of steroid hormone therapy in dermatology without undue risk.
2. An interesting and, to some extent, unique effect with this member of the steroid hormone family is the suppressive effect on psoriasis with relatively small doses.
3. The effect of the drug on alopecia areata is not apparent until the patient has been on therapy for about three to four weeks.

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"Sleep Cheats"

Many Americans are "sleep cheats." They're persons with a late-to-bed pattern which results in a sustained sleep shortage.

These "sleep cheats" are cheating only themselves and are taking chances on losing their jobs, their marriages, and even their lives, according to an article in the October Today's Health, an American Medical Association publication.

Sleep cheats are not to be confused with insomniacs, although their symptoms may be the same. "Sleep cheats can sleep, but they won't. They go to sleep all right, but they don't go to sleep early enough." All sleep cheats suffer some impairment of health. They can't stagger on forever. They have to settle up or eventually collapse from sheer exhaustion.

The signs of a chronic sleep shortage in the order they appear are:

—Poor timing and muscular control.

—Strained vision, with objects shifting size and shape.

—Impaired hearing, and reduced sense of touch, temperature, and pressure.

—Increased irritability, depression, and discouragement.

If the sleep debt keeps increasing, there may be a tendency toward what some psychiatrists call "loss of sense of reality." Fantasy oozes into fact.

Sleep cheats cheat for a variety of reasons. It may simply be a matter of money, as with the "moonlighter" who takes a night job to meet a family financial crisis. Some shun sleep, however, for neurotic reasons, as with the man-about-town, who races frantically to find excitement as an escape from reality.

The best way to tell how much sleep is enough sleep is to try "getting up without an alarm clock for a while. If you get to bed in time to wake up without an alarm and if you don't doze off during the day, you've gone to bed at the right time. Work out your sleep need over a stretch of several weeks in order to arrive at an accurate average, but remember that your need will vary with your activities."

The article was written by Theodore Irwin, Scarsdale, N.Y.

The Treatment of Asthmatic Bronchitis Including Use of Steroids and Antibiotics

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THE PURPOSE of this paper is to review the case histories of six children whose ages are from one through eight years, and who have had bronchial asthma complicated by a superimposed infection or an asthmatic bronchitis with persistent or recurrent bronchial asthma.

We think of bronchial asthma as a disease characterized by coughing, wheezing and dyspnea, which in the more exaggerated form becomes orthopneic. Patients with a superimposed infection, most frequently with an accompanying temperature elevation or a purulent sputum, are considered to have asthmatic bronchitis. In contradistinction to simple bronchitis, patients suffering from asthmatic bronchitis have superimposed wheezing. Status asthmaticus is that type which has not responded to the usual forms of treatment of bronchial asthma and frequently may be complicated by a superimposed infection. Severe cases of status asthmaticus with infection simulate asthmatic bronchitis in the severe form.

In the consideration of patients with asthmatic bronchitis, we have adopted the following groupings: 1. mild asthmatic bronchitis; 2. moterately severe asthmatic bronchitis; 3. severe asthmatic bronchitis. The six cases presented in this discussion fall into the third group of severe asthmatic bronchitis or status asthmaticus with infection.

Ehrlich et al.[4] have reviewed the treatment of these severely ill asthmatic patients with and without infection, and they feel that the infant and childhood patient is more difficult to treat than the adult equivalent for the following reasons: "(1) the mucosa and the tracheobronchial tree is rather redundant, and there is a decrease in the caliber of the passages due to spasm, edema, inflammation, increased amounts of secretion, all of which results in significant obstruction and resistance to air flow; (2) the cough reflex is usually present but not adequately utilized; (3) dehydration occurs more readily because of the hydrolability of infants and children; (4) certain authors feel that infections are one of the most important causes of asthma in infants and children, as compared to other opinions that foods and inhalants are of increasingly greater significance. This latter is present more in older children. Infection also assumes a greater significance because of its complicating role in status asthmaticus. Infants and children, unlike adults, are unable to localize their infection."

In critically ill patients having certain infectious diseases with and without serious complications, Spink[3] summarized the use of the adreno-cortical steroids: first, to allay the inflammatory response to infection or to eliminate a severe toxic state; second, that there is evidence that the administration of these steroids, along with other appropriate antibiotic therapy and further agents, contributes to the recovery of patients who have suffered peripheral collapse and shock due to the infectious agent; third, an ever-increasing number of patients are developing serious hypersensitivity reactions to therapeutic agents used in the infectious diseases, and the prompt administration of the steroids will modify these harmful reactions. It is desirable when steroids are used in asthmatic bronchitis that an appropriate antimicrobial agent be instituted, since the harmones do reduce the efficacy of the defense mechanism against micro-organisms. It is now generally appreciated and emphasized that the corticotropin and cortico-steroids have a rather profound metabolic effect upon patients, particularly when used in the management of infectious diseases. These agents should be given only for brief periods of

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Meticorten and Meticortelone were furnished through the courtesy of the Schering Corporation, Bloomfield, New Jersey.

time and only to carefully selected patients.

Burrage[1] emphasizes three points in the consideration of steroid therapy in asthmatic bronchitis. The three points that deserve emphasis are:

"1. Do not wait until the patient is moribund before starting the cortico-steroids for their action is not rapid;
2. Do not forget the possible value of the adjacent use of Epinephrine and Aminophylline during this initial steroid therapy;
3. Do not anticipate complete remission of symptoms the first few days."

Unger and Unger[2] have outlined some of the contra-indications. The adrenal cortico-steroids should be used with great care in patients suffering from pulmonary tuberculosis, peptic ulcer, psychosis, diabetes, hypertension, and certain infectious diseases. They also emphasize the importance of starting with large doses and decreasing the dosage as symptoms subside.

CASE REPORTS

Case 1. (15798 D.S.) This five year old white male was admitted to the Medical College of Virginia Hospital on July 8, 1955, suffering from severe asthmatic bronchitis. The past history revealed that he had had two previous episodes of asthmatic bronchitis and on one occasion suffered from urticaria. There was a family history of a maternal aunt suffering from bronchial asthma.

The child had been treated two weeks prior to the onset of this attack with an antibiotic for pharyngitis. The current attack began suddenly fourteen hours before admission, and the patient was seen by a physician one hour prior to admission. At that time he was dyspneic, slightly cyanotic, and had a temperature of 101°F. 0.2 c.c. of aqueous epinephrine hydrochloride 1/1,000 solution was given without any improvement in his condition. After admission to the hospital, a physical examination revealed a severely ill child, who was slightly cyanotic and very dyspneic. He appeared to be quite toxic and moderately dehydrated.

The child was immediately placed into an oxygen tent with oxygen and Alevaire mist. Sedatives and antibiotics were given. A hypodermoclysis was ordered, but there was a delay of several hours in giving these fluids. Six hours after admission the child's condition was critical. He was semi-comatose and markedly dehydrated. Five per cent glucose in water was immediately given intravenously. The intravenous fluids were allowed to continue for forty-eight hours. Eighteen hours after admission to the hospital he appeared improved. The initial laboratory reports were: white blood cell count 10,600; polymorphonuclear leukocytes 91%; CO_2 combining power 30 meq/L; serum sodium 136 mgs.%; serum chloride 95 mgs.%; serum potassium 4.4 mgs.%. X-ray of the chest was reported as showing bilateral emphysema with increased bronchovascular markings. Urinalysis: specific gravity 1.025; acid, albumin one plus, and the microscopic examination was negative. His condition continued to improve and he was discharged on the thirteenth hospital day.

An allergy survey was made in August, 1955, and he was started on a desensitizing program. Since that time he has experienced two mild attacks of asthma.

Case 2. (15250 W. L.) This eight year old white male child was admitted to the Medical College of Virginia Hospital on November 10, 1954, suffering from severe asthmatic bronchitis. The past history revealed that he had had recurrent attacks of asthma since 2½ years of age. The attacks were perennial with seasonal exacerbations, infections also precipitated the asthmatic attacks. He had been admitted to another hospital in May, 1953, suffering from severe asthmatic bronchitis. Following this admission, he had had an allergy survey. Some improvement of his condition had been noted after dietary restrictions and hyposensitization treatments.

The onset of the present illness began in August, 1954, coincident with the pollen season. Despite treatment through the fall, the asthmatic attacks became progressively more severe. At the time of admission to the hospital, he was markedly dyspneic and cyanotic. The neck veins were distended and he appeared to be dehydrated. He was immediately placed in an oxygen tent. Intravenous fluids were started and twenty units of ACTH were added to the fluids and twenty units of ACTH Gel was given intramuscularly every six hours. Antibiotics were included in the treatment. Seven hours after admission the patient's condition was improved.

Initial laboratory studies revealed a white blood cell count of 19,600; with 62% polymorphonuclear leukocytes, and the total eosinophil count was 66. The CO_2 combining power was 25 meq/L; serum sodium, chloride and potassium were within normal limits. Forty-eight hours after admission, the white blood cell count was 17,600. The serum sodium was 136 mgs.%; serum chloride 94 mgs.%; and serum potassium 3.1 mgs.%. The patient was given 5 grains of potassium chloride enseals three times a day. X-ray of the chest was reported as showing

increased broncho-vascular markings. Intramuscular ACTH Gel was continued for 12 days. The dose was gradually decreased. On the sixth hospital day, twenty-five mgs. of cortisone was given orally three times daily. The patient was discharged, on the fourteenth hospital day, on a maintenance dose of cortisone.

Since this admission to the hospital the child was initially started on cortisone and subsequently maintained on 2½ to 5 mgs. of Meticorten daily. He has been readmitted to the hospital on several occasions, suffering from asthmatic bronchitis. During these acute periods, Meticorten was increased and covered with antibiotics. Several carious teeth were removed, and in 1956 he had a tonsillectomy and adenoidectomy. Since that time, his condition has been improved, although he has been maintained on 2.5 mgs. of Meticorten daily along with hyposensitization and allergy management.

Case 3. (15498 H.T.) This four year old white female was admitted to the Medical College of Virginia Hospital for the first time at one year of age. She was suffering from severe asthmatic bronchitis. Despite symptomatic treatment, hyposensitization vaccine, intramuscular gamma globulin and Meticorten almost daily, she continued to suffer from asthmatic bronchitis. She was hospitalized for the twelfth and last time on January 17, 1956, because of wheezing and fever. Despite emergency treatment as outlined in Case 2, she became quite toxic and died eight hours after admission, in shock.

A summary of the autopsy report is presented below:

"Throughout all of the large bronchi, there is a very stringy, tenacious appearing mucus containing many polymorphonuclear leukocytes. There is thickening of the basement membranes of the bronchi and hyperactivity of all the mucous secreting cells. Eosinophils are seen here and there but are not numerous. The inflammatory component is very prominent. There is even superficial sloughing of some of the bronchial mucous membrane. This infection in itself would be sufficient to cause the demise of the child. We feel from looking at the lungs, that this child had suffered from bronchial asthma developing a rather severe secondary chronic bronchitis and interstitial pneumonitis (viral?) in the last episode of the illness. We do not believe that the marked inflammatory component in itself represents hypersensitivity inflammation. The adrenals are small with approximately one-third lipid loss of the adrenal fasiculata. The lipoid content of the glomerulosa and other parts of the fasiculata is normal in amount.

"In summary, we believe that this child was a true bronchial asthmatic who died as a result of secondary bronchial pneumonia. We do not believe that the changes in the adrenal are marked enough to be incompatible with life."

Case 4. (15040 E. W.) This three year old male was admitted to the Medical College of Virginia Hospital suffering from severe asthmatic bronchitis. Since the first admission he had been readmitted on six occasions. During each admission his care paralleled case 2 in character and management. This child has been a victim of parental marital maladjustment. An attempt was made to admit him to the Jewish National Home for Asthmatic Children. However, the parents refused to send him. This child has not been seen in the past two years, and we have no follow-up studies.

Case 5. (15626 C.D.) This three year old white female was admitted to the hospital for the first time in November, 1954, suffering from asthmatic bronchitis. The family history revealed that both the mother and younger sister suffered from asthmatic bronchitis and bronchial asthma. The onset of her illness began eight hours prior to admission, with coughing and wheezing. Physical examination at the time of admission revealed an acutely ill child. Emergency treatment was started and she was given a hypodermoclysis. Twelve hours after admission she appeared more toxic and dehydrated. Intravenous fluids were started and continued for twenty-four hours. Immediately after she became hydrated her condition began to improve. This case was similar to cause 1 and 2 in severity, character and management.

Case 6. (15645 S.K.) This two-and-a-half year old white female was first admitted to the Medical College of Virginia Hospital November, 1954. The past history revealed that she had had previous episodes of broncho-pneumonia and suffered from asthmatic bronchitis five months before admission. This child has been readmitted to the hospital ten times. On occasions she has been desperately ill, and at one time had a carditis associated with a generalized anasarca, requiring digitalization and mercurial diuretics. Between episodes of acute attacks she has been maintained on symptomatic treatment. Gamma globulin has been given intramuscularly in large dosages at three-week intervals. Her episodes of bronchial asthma have been precipitated primarily by infection. It is believed that she has developed fewer infections since she has been receiving gamma globulin and an autogenous vaccine and allergen mixture. Her general condition has improved in the past year and she has had fewer episodes of wheezing and tolerates moderate activity.

DISCUSSION AND TREATMENT

We have presented six case reports of children desperately ill, suffering from asthma complicated by an infection. These patients did not respond to the usual office treatment of Epinephrine HCL and antibiotics. At the time of the hospital admission or shortly after admission, they presented the signs and symptoms of impending death.

The child hovering between life and death is a real emergency. It is the responsibility of the physician in charge to write the initial orders attempting to give immediate relief. Later, it is wise to order certain laboratory studies that might be helpful for further treatment.

We have found that oxygen, sedation, fluids, adrenal steroids and antibiotics should be administered in the order given.

Oxygen

These children were immediately placed into a hood or tent with oxygen and moisture. High moisture content of the inspired air is essential. Unmoistened oxygen exerts an undesirable drying effect on the secretions of the respiratory tract. The use of wetting agents in the nebulizer solution was suggested a few years ago. A commercial available preparation (Alevaire), incorporating one of the substances (Triton WR-1339), has been used widely in the past two years in our hospital.

Sedation

These little patients are usually quite restless and apprehensive. Sedatives may be used freely. Morphine or other narcotics except Demerol should never be used in the treatment of asthma in either children or adults. The barbiturates are usually safe. Phenobarbital, Nembutal, or Seconal may be given orally or rectally. Hypodermic administration of sodium phenobarbital (½ grain to one grain) is occasionally necessary. Barbiturates occasionally excite the child. We have found that the use of rectal Chloral Hydrate has been very effective and the sedative of choice in dosages of one to three grains in half ounce of water as a retention enema. An overdosage of sedative in these already exhausted children is to be avoided. Deaths have been reported in status asthmaticus from oversedation in the acutely ill patient. On occasions very large total dosages may be required; however, one should give the minimum dose that will relax the patient.

Hydration

Hydration is very important, not only to restore body fluids, but also to assist in thinning out the bronchial secretions, frequently inspissated at this stage of the attack. Upon admission to the hospital, a hypodermoclysis was ordered. 20 c.c. per pound of a hypotonic solution of 2½% glucose and water or 2½% glucose and one-half isotonic saline was given with hyaluronidase. However, we were not able to hydrate these desperately ill patients with hypodermocylses alone. The technique of administering continuously intravenous fluids to small children may be difficult. In two instances a "cut down" was necessary. Continuous intravenous fluids were given at the rate of ten to twelve drops per minute. A simple method of following the state of hydration was by recording the urinary output. A catheter was inserted when necessary. A urinary output of at least 30 c.c. per hour indicated that hydration was established. Usually at this time, clinical improvement was noted. Barness and Gyorgy[5] have received the subject of hydration and have outlined in tables schedules for parental administration of fluids, and a review of their paper will be helpful.

Adrenal Steroids

Corticotropin, cortisone and hydrocortisone recently have been added to our therapeutic armamentarium. They are useful drugs for treating patients who no longer respond to epinephrine or aminophylline. They should not be used when other drugs will give relief. These drugs should be limited to short-term therapy of three to five days. One should not wait until status asthmaticus has developed to resort to this measure, and when this condition has developed, these drugs should be used immediately. There is some evidence that in the acutely ill patient a more prompt response is obtained from corticotropin than from cortisone. Much less hormone is required using Acthar-Gel than with the aqueous solution. The dosage schedules that might be employed with ACTH include 20 mgs. intravenously in sufficient 5% glucose in water to permit administration over a period of six to twelve hours, depending upon the patient's state of hydration. We also give ACTH as Acthar-Gel in dosages of from 20 to 40 to 80 mgs. or units as an initial dose and repeated smaller dosages from twelve to twenty four hour intervals, depending upon the patient's condition. It is important to give the patients large dosages of these steroids initially and then modify the schedule according to their response. Cortisone and hydrocortisone may be given in dosages varying from 200 to 300 mgs. in twenty four hour periods divided at six hour intervals. The dosage schedule for the

cortico-steroids Meticorten or Meticortelone (Prednisone and Prednisolone) are comparable to approximately one-fifth the dosage of cortisone and hydrocortisone. The significant feature of these two new drugs is that the drugs bring about the response in relatively small dosage. Of greater importance, however, is the apparent lack of side effects from these drugs. When the patient can take medication by mouth and retain same, then it is desirable to use either Prednisone or Prednisolone (Meticorten or Meticortelone). When the child is unable to swallow the tablet, we have prepared a liquid suspension in a suitable vehicle in dosages of 5 mgs. per dram and have found this satisfactory. These children tolerate comparable doses of these steroids to adults. Initially we may give 15 mgs. every eight hours for three doses and then reduce the dosage slightly progressively over a period of several days, maintaining that amount of the drug necessary for the control of the acute distress. The dosage may vary from 5 mgs. every eight hours to 2½ mgs. every second day. Our withdrawal of the drug is always gradual. Since the advent of Prednisone and Prednisolone (Meticorten and Meticortelone), we have used this form of the drug in preference to Cortisone or Hydrocortisone.

Antibiotics and Chemotherapy

Each of the six patients presented had a superimposed infection, which, no doubt, contributed to the severity of the asthmatic attack. Antibiotics were administered early. In our experience parenteral penicillin with or without the addition of Streptomycin has been most effective in diminishing the severity of the respiratory infection. Penicillin sensitivity, even with repeated courses, is extremely rare in children in our experience in contradistinction to adults. The broad spectrum antibiotics such as Terramycin or Erythromycin Sterate, Achromycin or Chloromycetin Palmatate have been used with good results.

One might note that thus far oxygen, sedatives, fluids, and the adrenal steroids have been emphasized. However, we have not disregarded the value of the use of epinephrine, aminophylline, expectorants and allied drugs to supplement treatment.

Epinephrine HCL

The dyspnea of asthma is chiefly expiratory, accompanied by marked wheezing. The best drug for the immediate relief of an asthmatic attack is epinephrine HCL. An aqueous solution of 1/1,000 is administered subcutaneously in dosages varying from 0.05 to 0.25 c.c. at intervals of fifteen minutes to several hours. The best dose is the smallest one that will give relief without undesirable side reactions. Many children develop severe pallor and nausea sometimes accompanied by shock-like symptoms from over-dosage; it is wise to start with a small dose and increase as symptoms warrant.

Each of these six children had had before admission or at the time of admission injections of Epinephrine HCL without obtaining relief. It was believed that this was partly due to the severe dehydration that was present. After hydration and treatment of the infection, one may see Epinephrine HCL again become effective.

Aminophylline

Aminophylline is a useful drug in asthma, but is not too effective orally in severe asthma in children. Aminophylline was used intravenously occasionally. One-twentieth grain Aminophylline per pound should be given slowly intravenously. We have found that the rectal administration of this drug is effective in doses of one to three and three-fourths grains either alone or in combination with chloral hydrate as a retention enema at six to twelve hour intervals, provided there is no nausea or side reactions. Aminophylline is a drug that is not well tolerated by many patients and one should be on the alert for toxic reaction as death has been reported from the use of Aminophylline.[6]

Expectorants have a definite place in the treatment of asthmatic bronchitis. The iodides are still our preference among the expectorants when tolerated. A saturated solution of potassium iodide may be given in fruit juice. It is wise to start with small dosages such as two to three drops, three times a day, and increase the dosage to tolerance.

Laboratory Studies

At the time the intravenous fluids were started, blood was drawn for certain laboratory studies.

A complete blood count was ordered. The majority of these patients showed an elevated white cell count and an increase in the polymorphonuclear cells, indicating an infection was present. Total eosinophil counts were usually ordered. After an injection of Acthar-Gel the fall in the eosinophils indicated an adrenal cortical response. Following steroid therapy, a reduction in the total eosinophil count was usually observed.

Urinalyses were ordered frequently. The change in the specific gravity from 1.025 to 1.010 indicated hydration.

Electrolytes

The importance of hydration has been emphasized. To adequately hydrate the child and stay in a metabolic balance, certain blood electrolyte determinations were necessary. The principal blood electrolyte studies obtained were:

1. Carbon dioxide combining power
2. Serum Sodium
3. Serum Potassium
4. Serum Chlorides

As might be anticipated, a tendency toward respiratory acidosis developed. This was indicated by a slightly elevated CO_2 and lowered NA and CI, accompanied by an acid urine. Blood pH's were not determined. In most of the respiratory disturbances little can be done for the definite correction of the acid-base disorder other than those measures which alter the course of the underlying disease. However, it is important to provide adequate and appropriate fluids and electrolytes so that renal compensation can occur. The primary solutions used in treating these children were glucose and sodium chloride.

Other Laboratory Studies

X-ray examination of the chest was obtained on admission. In all cases the films were read as showing either increased broncho-vascular markings, indicating bronchitis or broncho-pneumonia, accompanied by emphysema. Frequently serial x-ray films were made. Nose and throat cultures were obtained. From these cultures, sensitization studies were made and in some cases autogenous vaccines were prepared for subsequent use.

Follow Up

Since this critical episode of asthmatic bronchitis, each child has been followed for a period of six months to four years. One child, age four, had had twelve admissions to the hospital, two in status asthmaticus. The twelfth and last admission terminated in a fatal broncho-pneumonia. Of the five others, four have had recurrent rather severe episodes of asthma, despite every attempt to desensitize them to the offending allergens. One child (Case 1) of this series has shown marked improvement, and we think his prognosis is good.

When we consider children, we must think in terms of years. The life span of the average American is close to seventy years. Children who have suffered from severe respiratory allergies are a real challenge. They need all the help medical science can offer to enable them to reach adulthood.

Recently Gamma Globulin has been given with the thought of improving immunity. Certainly infection appears to be the trigger mechanism in precipitating a severe asthmatic attack. Several children in this series have received Gamma Globulin in doses of 2 c.c. to 5 c.c. at one to three-week intervals. The results of this therapy is certainly worthy of consideration. It is desirable to make determinations of Gamma Globulin by laboratory studies before starting Gamma Globulin therapy, and it is further desirable to check the Gamma Globulin levels at intervals.

SUMMARY AND CONCLUSIONS

1. Six case histories of patients suffering from status asthmaticus or asthmatic bronchitis have been presented. One child died of an overwhelming infection of broncho-pneumonia after her twelfth admission.
2. Infection has initiated the acute asthmatic bronchitis or status asthmaticus in the pre-existing allergic children. Five patients suffering from asthmatic bronchitis responded well to a treatment consisting of oxygen with Alevaire, sedation with rectal chloral hydrate, intravenous fluids of glucose and saline, steroid therapy, antibiotics and supplemental measures.
3. Epinephrine HCl did not apparently give relief until the patients were adequately hydrated and a response to antibiotic therapy was observed. From this study we feel that the steroids have played a prominent role in the therapeutic program.
4. Only four of the remaining five cases have been followed. Three of these patients are remaining relatively free of asthma on a combined pediatric and allergy management.

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Hunt for Radium Dial Workers

A world-wide search has been launched to find at least 2,000 persons who survived radium poisoning during the 1920's. These include persons who ingested radium during their work as luminous watch dial painters or during medical treatment. Between 1915 and 1930 radium was an accepted medical treatment for a number of disorders.

Contrary to popular belief, many of these people are still alive, probably in good health. If they can be found—and studied—some questions about the puzzling effects of radioactive deposits in the body may be answered. After all, they have carried radioactive material in their bodies for 30 years —a full generation.

American physicians have been asked to help find these individuals, many of whom have probably forgotten—or never knew—that they were once exposed to radium.

Writing in the October 11 Journal of the American Medical Association, Dr. Samuel D. Clark, Cambridge, Mass., asked doctors, nurses, and medical records departments to report any persons who suffered radium poisoning to a newly organized central catalog agency. The catalog is being set up at the Radioactivity Center of the Massachusetts Institute of Technology, Cambridge. Cooperating in the project is the Division of Biology and Medicine of the Atomic Energy Commission.

Dr. Clark noted that most medical records of these persons have been destroyed through accident or inadvertence. By collecting information about them in a central place, there will be available for study such data as the amount of internally deposited radioactivity, shortening of life span, susceptibility to disease, and the incidence of bone changes and tumors.

The information may help define "more precisely the safe levels of radioelements in the body," an accompanying Journal editorial said. It urged all physicians to cooperate in the study, adding that this cooperation "can help write the close of one of the most dramatic chapters in the history of medicine." With the use of x-rays and radioactive isotopes, "radium seems to be nearing the end of its period of usefulness in therapy."

The Radioactivity Center wants information about three types of persons:

—Those who ingested radium compounds of any sort either during their work (as watch dial painters) or during medical treatment.

—Those who received injections of radium compounds for such conditions as arthritis, hypertension, or gout.

—Those who suffered exposure in the process of radium research or the manufacture of radium products.

There are several conditions that should make a physician suspicious of radium poisoning, he said. They are: spontaneous fractures without evidence of cancer at the site of fracture; osteogenic sarcomas, a type of bone tumor, and cancers of the sinuses. He added that many watch dial painters had unusual trouble with their teeth, losing them at an early age and having long convalescences after extraction.

Dr. Clark of the department of medicine at M.I.T. is handling the medical supervision of the project, which is headed by Prof. Robley D. Evans. Collaborating in the study are researchers at the Argonne National Laboratory and Cancer Research Hospital, Lemont, Ill.; the New Jersey State Department of Health, and the Royal Cancer Hospital, London, England.

Non-Penetrating Trauma to the Pancreas

Discussion and Report of a Case

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PANCREATIC INJURY due to blunt trauma is uncommon. However, we believe it will be encountered more often in the future, and for this reason the following case is presented.

REPORT OF CASE

History: R.G.C. (R No. 92-676), a 37 year old white male, was admitted to the Veterans Administration Hospital, Richmond, Virginia, having been involved in an automobile accident eight hours prior to admission. The patient stated that the lower rim of the steering wheel, which had a recessed center post, struck him across the upper abdomen. Initially he suffered little more than a feeling of tightness in the upper abdomen. An hour after the accident, however, he was suffering intense generalized abdominal pain, could not stand erect, and was noted to be pale. The patient was seen at another hospital, received 1,000 cc of 5% dextrose in water, medication for pain, and was transferred to this hospital.

Physical Examination: A well-developed, well-nourished, pale male, complaining of intense, continuous left upper quadrant pain, lower abdominal pain, and pain in the left shoulder. Blood pressure, 70/50, pulse 120, respirations 20, temperature 99.6°, rectally. The skin was cool and moist. In addition, there were multiple abrasions of the face, chest and upper back. There was splinting of the left hemithorax, without localized tenderness over the rib cage. There was no mediastinal or tracheal deviation and the breath sounds were normal. The abdomen was flat with marked tenderness in the left upper quadrant and moderate tenderness in both lower quadrants. The left side of the abdomen was rigid and rebound tenderness was both generalized and referred to the left upper quadrant. The initial impression was traumatic rupture of the spleen.

Laboratory and X-ray Findings: Hemoglobin 12.6 grams; hematocrit 35%; white blood count 21,600; urinalysis, not remarkable. X-rays revealed a healthy adult chest and no evidence of free peritoneal air.

Course in the Hospital: Shortly after admission the patient's abdomen was explored. Approximately 2,000 c.c.'s of blood was found in the peritoneal cavity. The gastrohepatic omentum was disrupted and the pancreas was transected where it crossed the vertebral body, with brisk arterial bleeding superiorly at the edge of the transection. The spleen and third portion of the duodenum were normal.

Bleeding was controlled by suture ligature. The portion of the pancreas distal to the transection was resected. This was about two-thirds of the entire organ. The stump of the pancreas was closed with interrupted mattress sutures of cotton after a thorough search failed to reveal the pancreatic duct. The area was drained with Penrose drains and a 16 French rubber catheter, which were brought out through separate stab incisions. The patient received 3,000 c.c.'s of whole blood on the table. Postoperatively the catheter was attached to continuous suction.

On the first postoperative day the patient's serum amylase was 85 units. He was treated with intramuscular Banthine, antibiotics, nasogastric suction, and intravenous fluids. The serum amylase fell rapidly to normal, and, beginning on the fourth postoperative day, the drains and catheter were shortened daily. All drains, skin sutures and retention sutures were removed by the twelfth postoperative day, at which time the patient had been afebrile for five days and on a bland diet for five days. On the eighteenth postoperative day a glucose tolerance test was obtained and this was normal. After spending some time on leave from the hospital the patient returned and his serum amylase on the twenty-ninth postoperative day was 34 units, his hemoglobin 12.6 grams. A barium meal obtained at this time showed some distortion of the wall of the stomach along the lesser curvature, thought to be caused by adhesions. On the thirty-fourth day of illness the patient was discharged, asymptomatic. He was advised to remain on bland diet for three months.

DISCUSSION

Incidence: Pancreatic injury due to blunt trauma

is not common. However, there is reason to believe it is increasing. According to Clyne, only 30 such cases could be found in the literature in 1923.[1] On the other hand, in 1952, Joseph stated that 15 cases had been reported in the past 10 years, and in 1956, Culotta, et al, stated that during the past 10 years 20 articles, summarizing 53 cases in civilians, have appeared in the English literature.[2,3] Hence, there is certainly a numerical increase in the number of cases being reported.

MECHANISM OF INJURY

Any blunt trauma to the upper abdomen may conceivably injure the pancreas. However, the steering wheel is mentioned as the traumatic object by at least three authors, and it was the cause of injury in our case.[2,4,5] It may be that the recessed steering post in modern automobiles has decreased the incidence of crushing injuries of the chest. Instead, the driver's upper abdomen strikes the lower rim of the steering wheel when an accident occurs, with possible injury to abdominal organs. Thus, it is likely that developing a safety measure to decrease one type of injury may result in an increasing incidence of another type of injury. This is especially likely to be true as long as automobiles of ever increasing horsepower are driven at a high rate of speed.

DIAGNOSIS

Because of its infrequency the possibility of pancreatic injury from blunt trauma may not even be considered, especially when the degree of injury is mild and the symptoms minimal. However, it should be seriously considered in any accident in which patient gives a history of trauma to the upper abdomen. Once suspected, the diagnosis can usually be established or disproved by a serum amylase determination. We now believe with others that this laboratory test should be routine in every patient with upper abdominal trauma.[6] In a case like ours, in which there is considerable bleeding associated with the pancreatic injury, clinical findings will lead to early exploration and the establishment of the diagnosis.

TREATMENT

According to Kinnard, conservatism has been the keystone of treatment in the past.[4] The principles on which this treatment rest are: (1) physiological rest of the gastrointestinal tract through starvation and nasogastric suction; (2) decrease of normal activity through the use of atropine or atropine-like drugs; and (3) control of pain by adequate medication. Major deficiencies in conservative treatment are that it does not prevent development of undesirable sequelae of the injury such as pancreatic fistula and pancreatic pseudocyst, nor does it provide egress for active pancreatic juices which may accumulate in the peritoneal cavity. As a consequence, certain authors recommend early exploration in pancreatic injuries.[2,6] We are in agreement with the advocates of early exploration especially when the symptoms are severe. The course followed at operation will be determined by the extent of injury. In general, mild contusions with edema and/or hematoma may be drained. Small lacerations may be reappropriated by simple suture. Where there is extensive laceration with injury to the duct system, the devitalized pancreatic tissue should be removed and close attention paid to repair of divided ducts if they can be found. We feel that in cases where lacerations are extensive or where the gland has been transected, resection of the damaged portion is the procedure of choice. When this is done, the proximal end of the transected main duct should be ligated if possible and the pancreas closed with interrupted, interlocking sutures. Drainage should be instituted in every case.

SUMMARY

1. A case of transection of the pancreas due to blunt trauma is presented. Treatment consisted of resection of the distal segment.

2. Pancreatic injury due to blunt trauma is becoming more frequent, or at least it is being reported more often in the literature. As a mechanism of injury, being thrown against the steering wheel may become more common when an accident occurs, because in modern cars, with recessed center posts in steering wheels, the driver's abdomen strikes the lower rim of the steering wheel, instead of his chest hitting the steering post.

3. Serum amylase determination should be obtained in all persons treated for blunt trauma to the upper abdomen.

4. Though mild cases of traumatic pancreatitis may be treated conservatively, in general, early exploration is the treatment of choice. When the gland is transected, the distal segment should be resected.

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Want to Choose Own Doctor

More than three-fourths of the population of the United States want to choose their own doctor. In addition, they want to assume all or part of the responsibility for paying their doctor bills.

These were among the findings in a survey conducted among a sampling of the adult general population by Opinion Research Corporation, Princeton, N.J., for the American Medical Association.

The purpose of the study was to explore attitudes about the choice of physicians.

The study also showed that:

—Eighty-eight per cent of the population believe the right to see the same doctor regularly is of vital importance.

—Eighty-nine per cent believe that medical care in this country has improved over the past 20 years. Half of these persons ascribe the improvement to more and better research and advances in medical science.

Seventy-six per cent of the people said they wanted to choose their own physicians; 13 per cent saw no difference in whether they or someone else chooses their physician; 8 per cent preferred to have someone else choose, and 3 per cent had no opinion.

In answer to further questioning, 93 per cent of those surveyed felt that free choice would give them more confidence in the doctor; 84 per cent thought doctors would take a more personal interest in them, and 79 per cent believed they would have less trouble getting the doctor to make a home call.

Concerning the right to see the same physician all the time, 88 per cent felt this right to be very important. Of the 12 per cent who did not feel such continuity to be of vital importance, 8 per cent saw no difference in whether or not they saw the same doctor every time, and 4 per cent gave other comments.

In answering still another set of questions, 93 per cent felt such continuity would give them more confidence in the doctor; 92 per cent thought doctors would take a more personal interest in them, and 84 per cent believed they would have less trouble getting a doctor to make a house call.

When queried about the main advantages of a regular doctor, those interviewed gave a variety of reasons. Sixty-two per cent cited the physician's knowledge of their medical history. They said, "He knows your system inside and out from dealing with you regularly, he knows what you've had."

Also mentioned by 30 per cent was reliability on emergency calls; confidence in the physician by 21 per cent, and a closer relationship between doctor and patient by 18 per cent.

Concerning the payment of medical bills, a total of 79 per cent wanted to assume all or part of the responsibility for paying their doctor bills either by direct payment or by paying part of insurance premiums.

The 79 per cent breaks down into the following: 16 per cent for paying all doctor bills directly; 16 per cent for paying all costs of insurance plans, and 47 per cent for paying part of the cost of an insurance plan. The remaining 21 per cent favored someone else's paying the bills.

Addison's Disease and Pregnancy

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PREGNANCY in the patient with Addison's disease prior to modern therapy was a serious problem attended by a mortality rate up to 50%. Brent[1] reporting on 39 cases in the era of inadequate or impractical steriod replacement prior to 1950 indicated that early abortion was in order if the patient was in poor metabolic balance or could not be delivered from below. Even so minor a surgical procedure as abortion was attended by death of the patient in a significant number of cases.

Hendon and Melick[2] have collected 14 cases and added one of Addison's disease and pregnancy since the present era of replacement therapy. Snigh[3], Moore and Freedman[4] and Kaiser[5] have added one case each bringing the total reported in the English literature to 18 cases with successful termination of pregnancy.

The following case adds one more to the total and the only one in which Cesarean section was applied.

CASE REPORT

J. N., 19 year old white female had been under the care of one of the writers since August, 1952. She had been on treatment for Addison's disease since January, 1953. The treatment consisted of Cortisone, 25 mg. daily, Desoxycorticosterone Acetate sublingually, 2 mg. daily, and increased salt intake initially. In July, 1953 she began taking 2 cc. (50 mg.) Trimethyl Desoxycorticosterone by intramuscular injection once per month and discontinued the sublingual Desoxycorticosterone. She did very well on this regimen over the years. In the summer of 1955 the patient married and was found to be eight weeks pregnant in July, 1956. No change was made in the treatment regimen until October, 1956 when the Trimethyl Desoxycorticosterone was decreased to 25 mg./month although no edema or change in blood pressure had appeared.

In November, 1956, the Cortisone was decreased to 12.5 mg. daily. The patient never had morning sickness, weakness or other manifestations of adrenal insufficiency. She was admitted to the hospital February 19, 1957, at term. She had gained 36 pounds since May, 1956. Blood Pressure 120/80. Trimethyl Desoxycorticosterone had been stopped in mid January, 1956, in view of weight gain. Salt was never restricted. Edema was never apparent and blood pressure did not vary.

X-ray studies of the pelvis had left doubt in the mind of the obstetrician that delivery from below could be accomplished. It seemed to be in the best interest of the patient to save her the trauma of even a prolonged labor. Accordingly, the patient was given 150 mg. Cortisone orally on February 20, 1957, and a Cesarean section was performed on February 21, 1957. The patient received Tuinal, grains 1½, at bedtime the night before operation and at 8 A. M. the morning of operation. Demerol, 100 mgm. and Atropine, grain 1/150 were given on call to the operating room at 8 A. M. The operation was performed under spinal anesthetic augmented with intravenous Sodium Pentothal. She was delivered of an 8 pound female child in good condition. The operation took 35 minutes, total time, and the patient withstood the procedure well. The blood pressure was 100/70 mm/hg. at the start of the procedure, rose to a peak of 140/80 mm/hg. and at the end of the procedure was 100/80 mm/hg. Pulse varied 100-120 per minute.

The patient's post-operative course was relatively uneventful except for moderate generalized edema, thought due to overdosing with Cortisone. On February 22, 1957, she received 150 mg. Cortisone I.M. February 23, 1957, two days post-operatively, she was given 25 mg. Cortisone every eight hours and on February 24, 1957, returned to 25 mg. Cortisone daily per orum. On February 27, 1957, she was given 1 cc. (25 mg.) Trimethyl Desoxycorticosterone and she returned home February 28, 1957. The patient took food and fluids well from the time she returned to room until discharge. No parenteral fluids were used except 500 cc. of whole blood the day of operation. Laboratory studies on admission showed hemoglobin 12.3 grams, WBC 8,350 cu. mm., differential PMN 79%, lymph. 19%, monocytes 1%, eosinophil 1%. Urinalysis: alkaline, specific gravity 1.005, albumin negative, sugar negative, microscopic negative. She was Rh positive. Blood sodium 142 meq./L., chlorides 117 meq./L. Six hours post-

operatively blood sodium 144 meq./L. and blood chloride 107 meq./L. Twenty-four hours post-operatively the blood sodium was 142 meq./L. Hemoglobin at discharge was 12.1 grams.

The patient was re-admitted on March 4, 1957, 10 days post-partum. She had had a chill on March 1, 1957, 24 hours after return home. Fever had persisted since without any localizing symptoms. The physical examination was negative except for pallor and temperature of 101°. Blood pressure 100/60. Pulse 110. The obstetrician could find no abnormality along the birth canal or pelvic structures. She had continued Cortisone, 25 mg. daily. Clean voided urine showed a trace of albumin and many pus cells with clumping. WBC 7,450, PMN 86%, lymph. 14%. Hemoglobin 14 grams. Blood sodium 144 meq./L. Culture of the urine revealed E. coli. She was given Cortisone, 75 mg. orally per day in divided doses, Desoxycorticosterone, 2 mg. sublingually per day, and Chloramphenicol, 500 mg. every six hours. The patient responded promptly and was discharged on March 8, 1957, with a maintenance sulfonamide for what was considered a post-partum cystitis. In the subsequent six months patient has returned to pre-pregnancy weight of 125 pounds and continues in excellent health on Cortisone, 25 mg. daily, and Trimethyl Desoxycorticosterone, 50 mg. per month.

COMMENT

It is suggested[5] that the clinical course of pregnancy in Addison's disease which has been adequately stabilized by Cortisone in the non-pregnant state is in no way adversely affected by pregnancy. There is also nothing to suggest that Cortisone administration affects the pregnancy itself adversely under these conditions. Remarks on the seeming value of adrenal replacement therapy as a stimulant to fertility in Addison's disease are noted.[3,4] Brent mentions particularly the infrequency of spontaneous abortion in the pregnant Addisonian. The amenorrhea and infertility seen in Addison's disease are felt to be of the same order as associated with any chronic debilitating disease.

Variations in the amount of Corticoids needed for replacement during gestation follow the same pattern. During the last trimester either none or considerably reduced dosage of Cortisone and Desoxycorticosterone was the rule. In one case[5] the patient took only 50 mg. Cortisone a few hours before delivery and sustained the subsequent procedure well. In most instances, however, 100-200 mg. Cortisone was given in the 24 hours or less before delivery and equal amounts in the subsequent 24 hours decreasing rapidly subsequently. In the case reported here the rather excessive weight gain pre-natally was probably due in part to the prolonged use of Corticoids in full pre-pregnancy maintenance dosage well into the third trimester. The fear of bringing about a critical situation deferred advice about limiting salt also in this pre-natal period.

The reason for the apparent maternal remission in this stage of pregnancy is not clear. The fetal adrenal as a source of supply is generally refuted.[5,6] That Corticoid is produced by extra-adrenal sources, notably the placenta, is suggested[7] but discouraged by other workers.[5,6,8] The fact that adrenal insufficiency rarely represents complete adrenal deficiency and that stimulation of residual adrenal cortex may occur for reasons unknown at this stage of pregnancy is for the present the most satisfactory explanation.[6]

In the case presented here which is the youngest in age and length of time with known Addison's disease, although not the only primipara, the borderline pelvic measurements resulted in considerable discussion relative to means of delivery. The problem resolved itself to whether we could be more assured of the favorable outcome for mother and child by the elective procedure of Cesarean section or whether we could be confident that the available therapeutic measures would affect good control in the face of a possibly prolonged labor or worse complication. The past fear involving the Addisonian undergoing undue stress won out and section was decided upon. It is believed that we have committed this patient to section for any subsequent pregnancies but it is also felt the number of pregnancies should be limited on the basis of her disease.

In the event of overdosage with Cortisone, Desoxycorticosterone or salt pre or post natally it seems reasonable to avoid active diuresis or sharp salt restriction. Decreasing the Corticoids or stopping them is followed in a few days by relief and the potential excessive electrolyte loss and crisis is minimized.

Certainly we are at a point where the hypoadrenal patient can look forward to pregnancy with equanimity and confidence. A general scheme involving maintenance on usual control dosages of salt and Corticoids until the 7th month, then reduction of Cortisone to half and Desoxycorticosterone to zero should be effected. Allow salt as desired without special additions up to time of delivery. At the onset of labor or 24 hours before any elective means of

delivery 100 mgms. of Cortisone should be given and this dose continued daily until the immediate stress of delivery and early puerperium is over. Thus within 48-72 hours post-partum the patient may be back on the maintenance dose prior to the pregnancy. Desoxycorticosterone may be resumed within the first two weeks as the patient loses some of the weight consequent to extra hydration of pregnancy. No single plan can cover all the cases and a knowledge of the state of metabolic balance of the individual case will finally decide the dosage and time of changing them.

SUMMARY

Comments on the seriousness of pregnancy in Addison's disease prior to modern therapy with Corticoids are made.

Mention of 18 reported cases with successful outcome for mother and baby is presented.

Another case of pregnancy in Addison's disease, terminated by Cesarean section is presented.

Review of several aspects of adrenal function in pregnancy is summarized briefly and a general plan of handling these problems is suggested.

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Buy Christmas Seals!

How the human body sets up and maintains a resistance to TB is still in the realm of the unknown, except that we do know that general good health is a large contributing factor. At the present time several important research projects are being carried out—one at the University of Virginia in Charlottesville and another in Philadelphia—to answer this question. In these laboratories different strains of rabbits are bred for one purpose—to find out why some get sick when infected with TB germs and others do not. Some day this research may lead to a method of making all of us resistant to tuberculosis.

The crying need for such a method is pointed up by the fact that sixty-seven thousand Americans* were reported to have active TB in the year 1957—Americans who were not able to build up the necessary resistance. These with others who already had active TB bring the total known number of living Americans with active TB to a quarter of a million. This does not include another one hundred and fifty thousand Americans estimated to have active, infectious TB unknown to health authorities.

There is still a lot of tuberculosis in Virginia and it is costing Virginia taxpayers a tremendous amount of money, as TB is a long term illness that can remove a patient from his family and job for a year or more, even if found in the early stages of the disease. We cannot afford to be complacent. TB IS NOT LICKED YET IN VIRGINIA! BUY CHRISTMAS SEALS!

*Provisional figure.

Foreign Bodies in Gynecology and Surgery

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MY FIRST INTEREST in foreign bodies came when I was a student at medical school. There, in obscure jars, in the same room with the famous crowbar skull, were a potato and the ligamentum nuchae of an ox. These had been removed from the vaginas of women, where, if I remember correctly, they had been forcibly placed by irate, or possibly otherwise disturbed, husbands. The first husband was perhaps more Irish than the potato; and the second more?, or less?, bullish than the ox.

My next interest came a few years later as a teacher of anatomy at another medical school. Here a section of the head of a cadaver disclosed a perforation of the nasal septum. Lying in this perforation was a tarnished dime and an inner tube patch. We did not know the explanation of this finding but, as the corpse had come from an asylum for the insane, we facetiously, and without regard to the proper decorum of the dissecting room, speculated that the poor wretch had thought he was a slot machine.

Then in practice came the more serious interest, aroused through the finding of foreign bodies left by other surgeons. I will not cite these cases, but will present a recent case to illustrate the value, when the sheet count fails, of having used sheets with opaque markings.

The patient was the wife of a physician. He paced the hall outside the operating room during the emergency night operation. The patient was in a critical condition and the operation hazardous. To add to the difficulties the anesthesiologist, feeling it unsafe to do otherwise, induced little or no abdominal relaxation. All gave a sigh of relief when the final stitch was placed in the skin. Then the nurse, who had earlier reported all sheets and sponges accounted for, said she hated to tell us but she thought we ought to know, a mistake had been made, one sheet was missing. The patient was in a too critical condition for needlessly reopening and exploring the abdomen. Fortunately the sheets contained opaque threads; the patient was x-rayed on the operating table and no evidence of a foreign body found. This was a relief to us and to her husband, a radiologist, who examined the wet film with us. The patient recovered uneventfully and there has never since been evidence of a sheet left behind.

Parenthetically the need for insurance in foreign body cases is supported by a recent report of the first two years' experience of the Professional Liability Program of the American College of Surgeons. This report states that "among the cases that have been closed or are still pending, the largest number in which some liability was found to exist have been 'foreign body' cases, in which dressings, instruments, or other foreign bodies have been found in the patient's body following operations."

We have recently had a 49 year old patient from this State (West Virginia) referred because of intermenstrual bleeding. Examination showed a large benign polyp at the external os. It was removed in the office, and the patient was advised to return if there was continuation or recurrence of abnormal bleeding. Accordingly she returned in 2 months and was admitted to the hospital for currettage. The curette struck something metallic and on thorough curettage a broken spring pessary was brought out of the uterus (Fig. 1). Postoperative questioning revealed that 14 years previously a doctor had inserted the pessary into the uterus for contraception. Some time after that a portion of it had been expelled from the vagina. The patient showed this portion to the doctor, who examined her and said nothing was left behind. The device seemed to have served its purpose for there were no pregnancies during these 14 years.

Instances of fistula formation by pessaries are recorded. I have observed a long and deeply embedded pessary in the genital tract of a cadaver, and have seen it necessary to remove with a Gigli saw a doughtnut pessary impacted in the vagina of a living woman.

These cases of foreign bodies left in by physicians are of practical interest to us, but there are other cases more curious. It is with the latter cases, in which the patient or a second lay person has inserted foreign bodies into the female genital tract, that the rest of this paper is concerned.

From the Division of Gynecology, Medical College of Virginia.

Read at combined meeting of Kentucky Surgical and Virginia Surgical Societies, The Greenbrier, White Sulphur Springs, West Virginia, April 12, 1958.

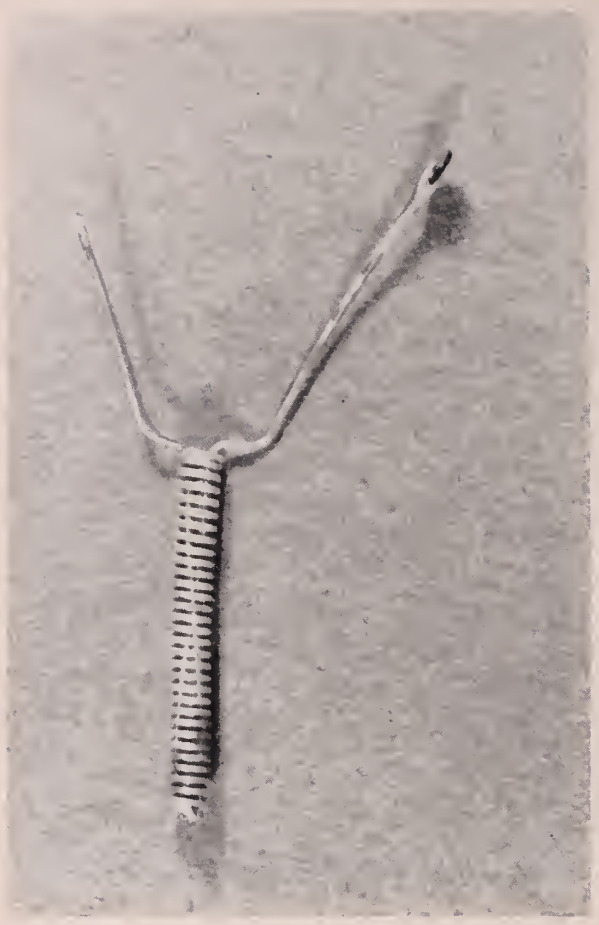


Fig. 1. Pessary removed from the uterus after 14 years.

The objects introduced may be either animal, vegetable, or mineral. The literature contains reports of cases in which the following were among articles found in the vagina: hair pins, safety pins, straight pins, stones, coal, calcium oxalate crystals, shells, paper, fruit, straw, cotton, splinters, grain, a hazelnut, corks, buttons, shoe buttons, rubber balls, metal boxes, hardware nuts, screws, the cap of a tooth paste tube, ox tongue, and leeches.

In most instances objects were present singly but in many cases the vagina contained numerous articles and some contained so many objects that they could be thought of as museums or storehouses.

The explanation for the presence of the foreign body is not always clear. It must be that in most cases the object is placed in the vagina by the patient herself, though she may deny this. Occasionally, perhaps, a child forgets what she has done, just as her mother forgets a menstrual tampon. In some cases the insertion of the foreign body is an act of masturbation; in others it may be due simply to a child's exploratory spirit. One child had previously put foreign bodies into her ears and nose. In one case an insane mother placed the object in the child. Some of the patients have been mentally deficient. In one case it was alleged that a brother, aged six, had placed the multiple objects found in his two and a half year old sister's vagina. A child, aged nine years, in whom a button was found, said a boy classmate had "played with her privates" and she thought at one time had put something in her vagina. In another case a tin box was said to have been forcibly inserted by someone who ravished the girl. Grain had been worked into the vagina of a nine months infant when she crawled onto a heap of rice. In another case a fruit had been inserted by a patient to treat a prolapsed uterus.

During one period of four months five cases of vaginal foreign bodies in children were seen at the Medical College of Virginia. The objects were a diaper clip, a safety pin, a toy clothes pin, a hair pin, and a pencil cap.

Leucorrhea is the outstanding symptom of a vaginal foreign body. Often the discharge is bloody and this in a child is almost pathognomic of a foreign body. In the case of a child, a rectal examination should be done and/or a small vaginal speculum used. Usually the foreign body can be palpated through the anterior rectal wall. The rectal finger will serve as a guide for introducing a probe or hemostat into the vagina. In many cases, when the instrument strikes the foreign body, a characteristic sensation is elicited. Metallic bodies may be detected by x-ray though this method of detection is rarely necessary. The object can be grasped with a hemostat or similar instrument under the guidance of the rectal finger, and removed usually without difficulty. In the case of sharp objects, care must be taken not to penetrate the tissues. Anesthesia is rarely necessary. Usually the signs and symptoms quickly subside following removal of the foreign body.

The following case was presented in Louisville last fall (my apologies to any of you who heard it) not too appropriately in a discussion of a paper on bowel resection in pelvic surgery in which the value of preoperative studies, including x-rays, was stressed. This case illustrated the usefulness of preoperative x-ray examination but as you will see is also germane to the present paper.

The patient, age 35, was admitted to St. Philip Hospital on June 7, 1957. She stated that two weeks prior to admission she was visiting her boyfriend and he beat her up, apparently she thought using a piece of pipe and knocking her into semiconsciousness. She thought that he inserted into the vagina

some object, probably the pipe, and she thought he kicked her in the genital region. She further stated that she was kept a prisoner in his quarters for three days, and that he and some relatives made an attempt to extract something from the vagina. She was finally brought to the hospital with a high fever, a distended, painful abdomen, vomiting, and absence of bowel sounds. Pelvic examination revealed blood in the vagina and a four inch laceration in the posterior fornix. The uterus and adnexa could not be outlined; the cervix was normal.

The patient was fluoroscoped to aid in the passage of a levine tube. This examination revealed a bottle in the abdomen (Fig. 2). At operation a



Fig. 2. Lateral x-ray of abdomen showing bottle in abdomen.

12 ounce Pepsi-Cola bottle filled with frank pus was found. The immediate postoperative course was stormy but the patient was discharged in good condition 23 days after admission. The boyfriend was tried, convicted, and sentenced appropriately to be bottled up for four years.

Why had this case been presented in a discussion of bowel surgery? It was a case of colitis—Pepsi Colitis, that is. The illustration shows the actual Pepsi-Cola bottle (Fig. 3). Out of deference



Fig. 3. Larger bottle actually removed from peritoneal cavity; smaller bottle for comparison.

to any of you who might be from Atlanta, a Coca-Cola bottle is also displayed.

A discussion of this case brought out the opinion that sometimes carbonated soft drinks are used as handy methods of douching and contraception, but I cannot vouch either for the accuracy of the opinion or for the efficacy of the method.

So much for the case of Pepsi-Cola. Now let's turn to the case of Early Times. This is told out of courtesy to our colleagues from Kentucky.

One day, not so long ago, I went into the examining room and found the patient and the nurse giggling. "What are you giggling about?" I asked.

"Shall we tell him?" the patient asked the nurse.

"Sure, tell him," said the nurse.

"Well, it was this way, doctor. I have a man who comes to work at my place once a week. I thought he was drinking my whiskey, so to thwart him I poured my whiskey into a vinegar bottle and forgot that I did it. So, doctor, I've just had a douche with Early Times."

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Public Health . . . .

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Tuberculosis Care in Sanatoria

Tuberculosis has been and remains Virginia's most important communicable disease problem. This is true in spite of the fact that throughout the country, and in this State as well, there has been a downward trend in deaths from the disease. The State Department of Health is charged with the responsibility of prevention and control of tuberculosis, as it is with all communicable diseases. This responsibility involves effecting a close integration and coordination of activities of all official and voluntary agencies, sanatoria, bureaus, groups, and individuals within the State of Virginia directly or indirectly concerned with tuberculosis control.

Sanatorium care for persons suffering from tuberculosis is provided at the four State sanatoria, Catawba and Blue Ridge Sanatoria for white patients and Piedmont and Ennion G. Williams Sanatoria for Negro patients. In addition, the State Department of Health provides a subsidy on a patient per diem basis to Grandy Hospital, Norfolk, for the care of Virginia resident Negro patients. This subsidy covers full payment for the cost of care of approximately 90 patients a day.

In spite of the marked downward trend in deaths as well as a mild decrease in the incidence of tuberculosis and the apparently increasing number of vacant beds reported in Virginia's tuberculosis sanatoria for white patients, there are problems that cause great concern to the Commissioner and to the directors of the sanatoria for white patients. Both Piedmont and Ennion G. Williams Sanatoria are usually filled and the Grandy Hospital supplements the beds for Negro patients by taking authorized patients mostly from the Tidewater section at State expense. This being true, the appropriation made by the General Assembly of 1958 for the State sanatoria for Negroes was in the amount requested. It was probably felt by members of the General Assembly that in the sanatoria for white persons the reduction in the number of patients existing at that time in itself represented a proportional decrease in cost of operation and would continue. The appropriations for these two institutions were reduced. This has already resulted in one of these sanatoria having to operate at a deficit; at least $100,000 additional will be needed to carry on through the biennium.

Cost of operation never decreases in proportion to increasing vacancies in any hospital. A low figure of 225 patients in Catawba Sanatorium prevailed at the time the 1958-1959 and 1959-1960 appropriations were made. During the winter following this figure rose to 265 and now is around 250.

Also to be taken into consideration are the usable vacancies existing. In the original planning for operation of the sanatoria, equal provision was made for the care of male and female patients. It is now true that tuberculosis occurs more frequently in older men. Thus, when vacancies occur, they are usually in the women's wards and in the ambulatory wards. The number of women patients has decreased to such an extent that two of the original wards allotted to women at Blue Ridge Sanatorium have been converted into men's wards. Virtually all applications for sanatorium care today are for those requiring infirmary care. The average age of patients entering the sanatoria has increased during the past five years from 38 to 49 years. Older patients are found to have more advanced tuberculosis and require extra medical care and much more nursing care. All of the increased demands on the professional staffs are not because of tuberculosis but because in the older age groups non-tuberculous conditions commonly found in persons of advancing years are present in addition and require treatment and care as well. These conditions even place extra demands and call for the employment of additional personnel. Recently there were 35 special diets being prepared for patients being treated for diseased conditions other than their tubercular infections. It requires as much medical and nursing attention to care for a present day less-than-capacity load of older patients than it did a few years ago to take care of the full-capacity needs of younger patients who had only a few complications.

Infirmary cases cannot be put into beds provided for ambulatory patients. The patients occupying them must be able to walk to the cafeteria for their meals. No acutely ill or bed-fast patients can be transferred to them because these wards are sparsely staffed and are not equipped to serve the needs of

patients requiring close supervision and attention. Nursing care is minimal. The reduction in cost of overall operation is very little when there are vacancies in these beds.

As of November 1 of this year, there were four vacancies for males and twenty for females in the infirmary at Blue Ridge. Opposed to this were twenty-eight vacancies in the male ambulatory ward and fifty-seven in the female. At the same time there were twenty vacant beds at Catawba for male infirmary cases and eight for females needing constant care. In the ambulatory wards at Catawba there were thirty additional unoccupied beds for males and fifty-two for females. It should again be emphasized that costs of operation of any hospital never decrease in proportion to increasing vacancies.

Add to these facts the general rise in the cost of living and it is readily seen why the time has not come to be able to consider reductions in appropriations for the operation of the State tuberculosis sanatoria. Indeed, if all infirmary beds can again be occupied to full capacity as a result of case-finding efforts now in the offing, appropriations will have to be increased. A concrete illustration of an increase in the number of sanatorium cases as a result of case-finding is provided in the pilot study which was made in Lee County in 1957. An intensive program of education on tuberculosis was carried on and was followed by an x-ray survey during the month of August. In the spring of 1958 the number of patients from Lee County in Catawba Sanatorium was double the number that had prevailed for years. An intensive program of case-finding in any community would uncover cases of tuberculosis that had not been known, many that had not been suspected, and the complacency with which many now regard tuberculosis would be partially dispelled.

Another point to be considered is that in spite of the advancing average age of patients being admitted, our sanatoria for white patients are treating twice as many individuals each year as they did before the advent of modern drugs and surgery. Most patients spend little or no time in the ambulatory wards before they are transferred to their homes. Regional chest clinics established throughout the State assist local physicians in the follow-up care of their patients and make feasible earlier discharge of these patients from the sanatoria.

The tuberculosis problem in Virginia has not reduced as much in scope as it has changed in character and complexion. The extent of the problem is no longer to be measured in terms of deaths per annum but rather in the number of new cases found each year—there were 2,000 new cases reported in Virginia last year. Equally important is a steadily increasing number of partially cured patients who may be found in almost every community. These persons have taken enough treatment to keep from dying but not enough in many instances, to get well. They may be classed as "intermittently communicable" and are sources of spread of the disease unless they are carefully supervised.

It is estimated that there are at least 5,000 cases of active tuberculosis in Virginia who have yet to be identified. They belong in the as yet "undiscovered group". By other estimates this figure runs as high as 10,000. There are 7,500 known cases of active pulmonary tuberculosis on the public health registers today who are taking treatment or who need to take treatment. Clearly, adequate treatment must be added to early diagnosis to assure complete and permanent cure. Treatment of selected early cases outside of a sanatorium can be justified only if the end results can be shown to be comparable to sanatorium care.

One still hears tuberculosis referred to as that "dread" disease. More people must be provided with a better balanced understanding of the disease as a whole and must be made to realize that there is a brighter side to the picture. It is well within the compass of most communities to eliminate tuberculosis as a serious health problem if they will make a serious effort to do so NOW. The most "dreadful" thing about tuberculosis is the way people have dealt with it in the past. While it is wrong to look upon it with dread, it is equally shortsighted to look upon the present situation with complacency.

No chain in the link of adequate care can be weakened. Sanatoria must continue as bulwarks in the care of individuals, prevention of spread and final elimination of the disease as a serious public health problem.

The State Health Department and the medical profession generally must uphold their responsibilities in maintaining this program.

Mental Health . . . .

TERKILD VINDING, M.D.

Treatment of Epilepsy in a State Mental Hospital

Due to the fact that mental hospitals are designed to offer custodial care as well as treatment for mentally ill patients, it is not easy to establish an index which will reveal the effectiveness of the treatment programs alone.

The author wishes to report a method which will yield information about the results of a *treatment* program for epileptics within a custodial setting by the adequate recording of seizures and compilation of statistics pertaining to patients who, for various reasons, suffer from such seizures.

Group studies of epilepsy are well-known in the literature. Usually, however, the results are misleading because a few patients have a great number of seizures while others have few. This leads to coloring of one or the other comparison groups.

The study outlined in this paper shows how this error can be avoided by using a simple statistical recording system which will allow an overall perspective of the progress month by month, including the screening of those patients who affect the statistics unduly by the number of their seizures.

Hospitals are frequently requested to test new anti-convulsant drugs in order to find better ways to benefit the epileptics. It will be shown how a statistical base line for such work can be arrived at in a simple way.

During the calendar year of 1957, two wards were designated for 113 male colored epileptics in Central

CHART I

COLUMN	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
DIAGNOSIS	C. N. S. syphilis	Senile arteriosclerotic	Epilepsy	Other organic C. B. S.	Schizophrenic reactions	Manic depressive reactions	Other psychoses	Neurotic reactions	Personality disturbances	Alcoholism	Drug addiction	Mental defectives	A. B. S. C. B. S. unknown causes	No mental disorder		
Age															Age	Total
10–14															10–14	
15–19			4				1								15–19	5
20–24			4									2			20–24	6
25–29			9	1					1			2			25–29	13
30–34			13	1								3	1		30–34	18
35–39	1		15						1			1			35–39	18
40–44	2		9										1		40–44	12
45–49			10	1	1							3			45–49	15
50–54			2	2								2			50–54	6
55–59		1	12	1								2			55–59	16
60–64			2												60–64	2
65–69				1											65–69	1
70–74															70–74	
75–79															75–79	
80–84			1												80–84	1
85–89															85–89	
90–94															90–94	
95–99															95–99	
100–104															100–104	
Total . . .	3	1	81	7	1		1		2			15	2		113	113

VINDING, TERKILD, M.D., *Staff physician, Central State Hospital, Petersburg, Virginia.*

Approved for publication by Commissioner, Dept. Mental Hygiene and Hospitals.

State Hospital. Proper records were kept daily of the number of seizures per day and per month per patient, the type of seizure per patient and the total number of seizures and types of seizures per day and per month. Also the number of wet bed sheets were counted every morning to get some measure of possible additional nocturnal seizures, not otherwise recorded.

The distribution of the patients in terms of diagnosis and age groups is given in Chart I.

It will be seen that eighty-one patients are classified as epileptics (idiopathic epilepsy), fifteen as mental defectives having epileptic seizures, other organic chronic brain syndromes constituting the patients with chronic brain traumas associated with epilepsy, etc.

These facts are brought out in Table 1 which shows the total of seizures recorded in 1957, the number of seizures by the remaining patient population, the actual number of patients per month having had seizures and also the monthly total of seizures.

It will be seen that during some of the months in 1957 there is good agreement between the number of seizures suffered by the remaining population and the total seizures recorded, whereas in other months greater differences occur. These differences are mostly due to the fact that a few patients died in status epilepticus which raised the number of seizures recorded for that month considerably. For instance, one patient had, in December, 81 seizures in a series of status epilepticus before he died. In May, 1957,

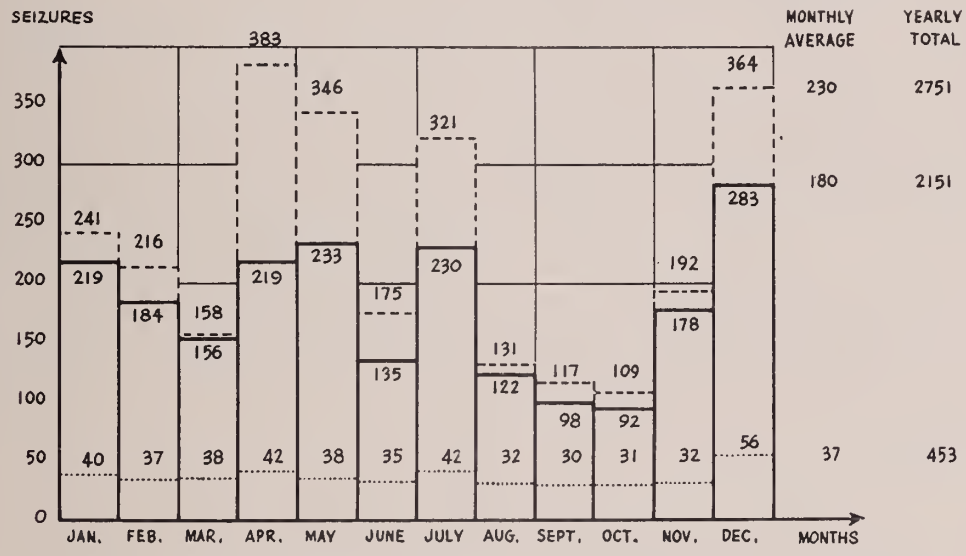


TABLE 1.—*Recorded Number of Seizures for 113 Epileptic Patients During 1957*
_____Total of Recorded Seizures in 1957 (2751)
————Number of Seizures by Present Population During 1957 (Exempting Those Died, Transferred or Furloughed)
. . . . . .Actual Number of Patients Having Seizures in 1957

During 1957, the epileptic patient population totaled 2,751 seizures. This must be regarded as a minimum figure as some patients may have had seizures during their sleep. Such seizures were not recorded due to supervising facilities. As will be discussed later, a few patients died, some were transferred to other wards, and some were furloughed during the year. The number of all patients' seizures is included in the total. Of the patients remaining in the wards per January 1, 1958, a total of 113 patients had 2,151 seizures recorded during 1957. The difference between the total of seizures recorded during 1957 and the number of seizures had by the remaining patient population thus amounts to 600 seizures.

108 seizures were suffered during one week by ten patients who were put on an experimental drug, AHR 85, which proved to have no therapeutic effect. In July, 1957, the number of recorded seizures rose because the nursing service failed a couple of times to give the prescribed medication in the evenings.

In the greater part of the year, there is a fairly definite relationship between the total number of seizures and the number of seizures suffered by the present population, indicating that the ward, as far as population goes, was a pretty stable one.

An average of 37 patients had seizures every month in 1957.

The distribution of seizures will be clear in Table

2 which lists the number of patients and the number of seizures.

It will be seen that 20 of the 113 epileptics have had no seizures at all during 1957, and that 23 patients have had from one to three seizures during 1957. It is immediately apparent also that the ten patients in the right half of the table are the ones really responsible for the great number of seizures, ranging from 60 seizures a year to 227 seizures a year.

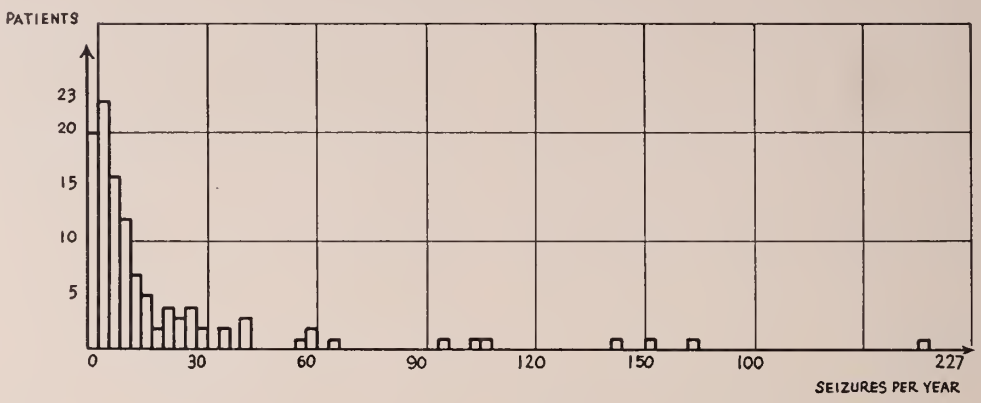


TABLE 2. Number of Seizures Per Patient in 1957 (113 Patients)

The Type of Seizures

Out of 90 epileptics studied, the clinical type of seizures was in 48% grand mal seizures which is also found to be average for much larger statistical materials. Twenty-four per cent had psychomotor epilepsy, which would be expected considering the fact that the occurrence of psychomotor seizures in public may destroy a patient's social-economic status on account of its conspicuity. Therefore, such patients will naturally gravitate toward a mental hospital in a greater number, than those with grand mal epilepsy alone.

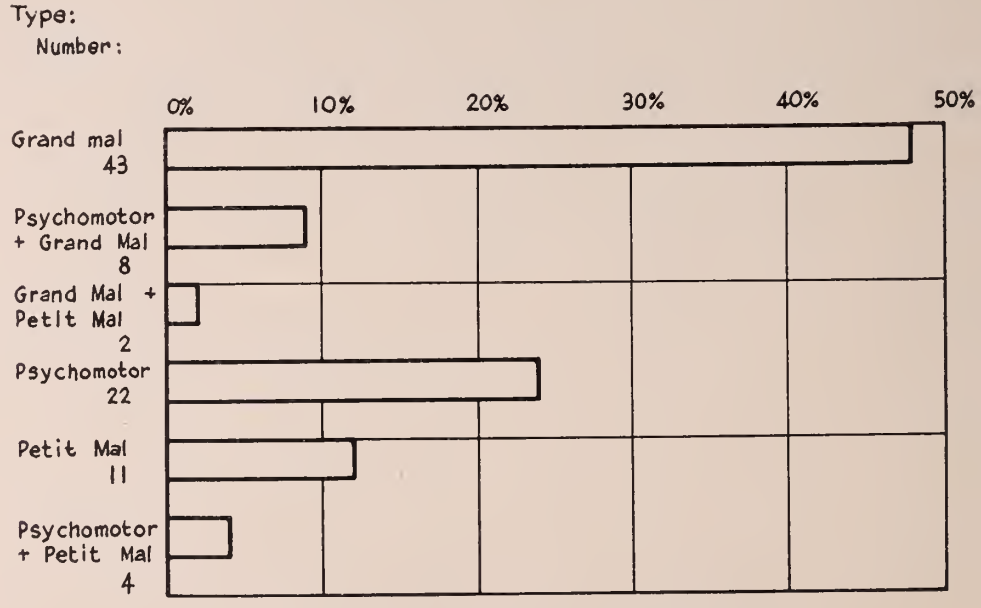


TABLE 3. Clinical Types of Seizures (90 Epileptic Patients)

Discussion

Of prime importance to the psychiatric department and the nursing staff is the maintenance of an up-to-date total perspective of the status of the patients, the securing of adequate treatment and a documentation of the effect of the treatment. This has been accomplished by a simple recording system used daily by the ward personnel in such a way that the degree of effective administration of the ward can be easily ascertained, including correction of treatment and care for the patients most in need of attention. The number of wet bed sheets were counted

every morning in order to get some measure of possible additional seizures not recorded during the night. The number of wet bed sheets were not found to be statistically significant related to seizure activity, remaining on a fairly constant level throughout the year, except during summertime when the number of wet sheets rose during the time when watermelons were served the patients.

SUMMARY

One hundred and thirteen male colored epileptic patients have been studied in regard to seizure activity for one year. The use of a simple recording system has been proven to be of value in screening the few patients accounting for the great number of seizures in the group, thus allowing group comparisons as to seizure frequencies. The compilation of datas has been found to be useful as a base line for the testing of anti-convulsant drugs, and has stimulated the nursing staff into a greater interest and awareness of the problems peculiar to the custodial care of epileptics.

Health Insurance for the Aged

The number of older aged persons with health insurance is growing at a much faster rate than the senior citizen population itself, according to a newly published survey by the Federal Government.

The Health Insurance Institute, citing a June, 1958, study of the U. S. Department of Health, Education and Welfare, reported today that a greater percentage than ever before of the older aged population is now protected by voluntary health insurance plans.

The senior citizen population is increasing at a rapid rate. Today, there are nearly 15 million Americans who are 65 years of age or over. This figure is expected to rise to 21 million persons by 1975.

The government study shows that the number of Americans 65 and over increased by 13% from March 1952 to September 1956, while the number of senior citizens covered by health insurance went up 56%. These figures do not include persons in institutions, such as homes for indigent care.

The growth trend held true over the 1952-1956 span for each age bracket among older persons. Thus, the number of persons in the 65-69 age bracket increased by 7% while the number of insured grew by 40%. In the 70-74 age class, total population went up 15% and the insured increased 68%. The number of persons 75 years old and over climbed 18% while the insured portion of that age group rose by 87%.

The government study also pointed out that 26% of the population in their senior years, or one out of every four persons 65 and older, had health insurance in March 1952. By September 1956, this proportion had climbed to better than one out of every three, or 37%.

In recent months, top U. S. medical and insurance spokesmen have drawn attention to the need for more adequate health insurance coverage for senior citizens.

Dr. F. J. L. Blasingame, General Manager of the American Medical Association, said last May that financing health care for our older age population was the major problem which voluntary health insurance and medicine must solve jointly.

Morton D. Miller, Chairman of the Health Insurance Council, a federation of insurance associations, last August stated that "the extension of coverage for our senior citizens" was one of two major problems facing health insurance. He listed rising medical costs as the other.

Health insurance, the Institute reports, is being extended to more and more older persons in a variety of ways.

One method is by permitting workers to continue their insurance under group policies (usually available through the place of employment or union sponsorship) after retirement, or to convert their group coverage to an individual policy. Another is the issuance of new insurance to groups of older persons and to individuals at advanced ages.

Still another is a type of health insurance that becomes fully paid up for life at the age of 65, thus enabling the policyholder to pay for his protection during his younger, more productive years.

The Health Insurance Institute is the central source of information for the nation's insurance companies serving the public through voluntary health insurance.

Pre-Paid Medical Care....

Edited by
RICHARD J. ACKART, M.D.

"Blue Shield, pioneer in the prepaid medical care field and the only doctor-sponsored plan, has more than justified its creation and support by the profession. The doctor, as well as the patient, has benefited tremendously. As so often is the case in helping others, some of the benefits rub off on the benefactor." This opinion, so well expressed by Dr. Robert S. Schaeffer when he was President of the Medical Society of the State of Pennsylvania during 1956, recently has been seconded by two other well-known physicians. Dr. Charles A. Hoffman, as President of the West Virginia State Medical Association, this past July devoted his special page in his State's Journal to clarification of any misunderstanding about Blue Shield's relationship with the medical profession. Then, during September, Dr. Henry A. Davidson, editor of the Journal of the Medical Society of New Jersey, published an article reflecting his rather good opinion of what Blue Shield is doing for doctors, as well as for subscriber-patients. With the kind permission of the persons involved, these two articles are republished below.

R.J.A.

Is Blue Shield a Third Party?

CHARLES A. HOFFMAN, M.D.
Huntington, West Virginia

This President's Page is more or less my answer to what is considered a debatable point by many of our members. The supposition that Blue Shield is a third party was raised on various occasions during my recent visits to component medical societies. This question has surprised me a great deal, for I cannot see how anybody who has concerned himself with studying the history and workings of Blue Shield can express himself as considering Blue Shield a third party.

Blue Shield was pioneered by physicians and is run by physicians. The majority of the National Blue Shield Commission, which is the elected Board of Directors of the National Association of "Blue Shield Medical Care Plans", are physicians. They represent the 78 medical society-sponsored, non-profit, Blue Shield Plans. The Commission has pointed out in a recently issued policy statement that Blue Shield is an organization of the profession itself, and not a third party between doctor and patient.

It would appear to the writer that in simplest terms, a "Third Party" must be some person or agency over whom neither the first party, which in the case in point is the patient, nor the second party, the doctor, exercises any control. This would mean somebody entirely independent of both the doctor and the patient, such as with private insurance companies, health funds, etc.

The first requirement of a medical pre-payment plan that desires to call itself Blue Shield is that it be approved by the county or state society in the area which it serves. The second requirement is that all medical policies and operations be under medical control. The third is that it earn the voluntary participation of at least a majority of the doctors in the area to be served.

With this knowledge at hand, one must assume that any physician who continues to believe that Blue Shield is a third party must be unfamiliar with the program.

The Quiet Side of Blue Shield

An Editorial

Scandals get bolder headlines than marriages, births, or philanthropic donations. By the same rule of human perversity, we often take articulate notice of Blue Shield only when we have some fault to find with it.

Whenever four or five colleagues are gathered, some critic may take shots at the Blue Shield Plan. Often the complaint has something to do with the Plan's payments. Perhaps the allowance for a certain procedure seemed inadequate for the particular case, or the Plan didn't cover the diagnostic work that was needed, or the Plan has been persistently requesting a detailed operative report to explain a pending surgical claim.

What's good about Blue Shield, anyway?

Well, for every case where the Plan's payment has been inadequate, delayed, or refused as ineligible—there have been scores of other cases for which reasonable payment has been swiftly remitted. Actually, Blue Shield's payment for an eligible claim, properly presented, is as fast and dependable as any source of income we have on our books.

As for the Blue Shield payment in a particular case, we have a unique recourse. The fee schedule is arrived at—and continually adjusted—with the advice or at the request of our medical society. And if the scheduled payment is out of line with the service required in a particular case, the complainant can ask for a review. Blue Shield is the only prepayment program whose medical policies are subject to our own guidance and control.

Another unique virtue of Blue Shield has to do with the economic segments of the patients whom it covers. Because of its community approach and its unmatched economy of operation, Blue Shield is the one medical prepayment plan that covers the lower income groups who most need protection. Hence, through Blue Shield, doctors are now being compensated for services rendered to a considerable number of people who, were it not for Blue Shield, would still qualify for our free services in hospital wards and clinics.

Blue Shield is the Profession's Plan, and a successful plan, too. Nationwide, some 43 million patients are now buying Blue Shield every month, and thousands more are joining them every day. In so doing, these friends and neighbors are expressing their confidence in medicine and in our American system of independent private practice.

Blue Sheld merits a pat on the back from doctors too.

Strokes

That early rehabilitation can help stroke patients regain many of their abilities, even though considerable brain damage may have been caused, is brought out in the booklet, "Strokes, A Guide for the Family," published by American Heart Association and available free of charge on request to Virginia Heart Association, 12 South Third St., Richmond 19, Va.

The booklet calls early rehabilitation "the most dynamic step in current treatment" of strokes and adds that doctors have found that it helps many stroke patients live and work again to their full capacity.

In addition to describing the nature of strokes, the booklet gives specific pointers on how the family can help in the patient's recovery. It suggests a number of self-help devices that stroke patients can use during the rehabilitation process and discusses the problems of patients with speech difficulties. The booklet also lists a number of recommendations that doctors have for families of patients who may require care over a long period of time.

At the Annual Meeting . . . .



Past, Present and Future.

Dr. Harry C. Bates, Jr., immediate past president, Dr. Walter P. Adams, president, and Dr. Allen Barker, president-elect.



200 Years of Service

Dr. David Luther Rawls, Suffolk
Dr. Samuel Clarence Couch, Cleveland
Dr. Mead Stith Brent, Heathsville
Dr. Tivis Colley Sutherland, Haysi

These four members were present to receive their certificates for fifty years of practice.



Dedication of the Headquarters Building

Dr. James P. King, chairman of the building committee, Robert I. Howard, executive secretary, and Dr. Bates see that the cornerstone is properly laid.

The Medical Society of Virginia . . . .

Council Minutes

The meeting of the Council of The Medical Society of Virginia was called to order by Dr. Harry C. Bates, Jr., President, at 1:00 P.M. on Sunday, October 12, 1958 at the Society's new headquarters building. There was a 100 per cent attendance. Attending were Dr. James D. Hagood, Dr. Walter P. Adams, Dr. Harry J. Warthen, Dr. Mack I. Shanholtz, Dr. J. R. B. Hutchinson, Dr. S. K. Ames, Dr. K. K. Wallace, Dr. Benjamin W. Rawles, Jr., Dr. Fletcher J. Wright, Jr., Dr. Louis P. Bailey, Dr. Alexander McCausland, Dr. Harold W. Miller, Dr. David W. Scott, Jr., Dr. James P. Williams, and Dr. J. D. Zylman. Also present were Dr. K. D. Graves, Secretary of the State Board of Medical Examiners, Dr. Walter A. Porter, Chairman of the Finance Committee, Dr. Vincent W. Archer, Dr. W. Linwood Ball and Dr. Allen Barker, Delegates to the American Medical Association, Dr. John C. Watson, Chairman of the Virginia AMEF Committee, Dr. James L. Chitwood, Chairman of the Insurance Committee, and Mr. Robert C. Duval, Jr., Attorney for the Society.

Dr. Watson opened the meeting by acquainting Council with the problems faced by his AMEF Committee. Brought out was the fact that too few physicians are contributing to the Foundation and too few component societies are cooperating by appointing local committees. It was suggested that Dr. Watson introduce a resolution before the House of Delegates calling attention to these facts and requesting the House to support the efforts of the State Committee. An article for the December issue of the Virginia Medical Monthly was also proposed.

Council then heard a report from Dr. Chitwood with reference to major hospital insurance proposals submitted by the American Casualty Company and Blue Cross. Attention was called to the fact that while the commercial proposal apparently contained features most acceptable to the profession as a whole, the Blue Cross Plan would make the coverage available to those members who perhaps need it most—those above 70 years of age. After considerable discussion, it was recommended that the Society accept the proposal of the American Casualty Company as submitted by Mr. David A. Dyer, Roanoke.

Dr. Porter presented the report of the Finance committee and the proposed budget for 1958-59 was carefully considered. The budget, as adopted, is included in the Minutes of the First Session of the House of Delegates.

Dr. Archer then commented on a letter which he had received from a member of the AMA House of Delegates with reference to a dinner to be sponsored in Miami during the 1960 AMA meeting. The dinner would be sponsored by all of those southern state societies which, because of limited facilities, have never had the opportunity to entertain an AMA meeting in their areas. Inasmuch as this item would come up for discussion again next year, it was moved that the Society participate in this venture, and that the details be considered in October, 1959.

Council was advised that the Virginia Medical Service Association had done a splendid job as fiscal administrator for the Medicare Program and should have the Society's approval before the present contract is renegotiated in November. It was moved and passed that this approval be granted.

The advisability of publishing the new Medicare fee schedule was discussed and it was brought out that in many states the schedules have probably done more harm than good. Actually, the schedule is a maximum one and the physician is supposed to always charge his usual fee when it is lower. It was moved and adopted that the next fee schedule negotiated by the Society not be prepared for general distribution.

The objectives of the Virginia Association of Medical Assistants were made known to the Council with the request that they be approved. The organization was commended for its fine work and a motion was moved that its objectives be approved. The motion carried.

The importance of a closer liaison between Council and Delegates to the AMA was discussed. It was then moved that Delegates to the AMA be granted full membership in the Council and the House of Delegates and the Constitution and By-Laws be amended accordingly. The motion was adopted. It was agreed, in the meanwhile, that AMA Delegates be invited to all Council meetings.

The 1960 Annual Meeting was the next topic of discussion and Council was informed that an invitation was expected to be extended by the Norfolk County Medical Society. It was mentioned that The Medical Society of Virginia might possibly be

forced to plan its meetings three years ahead in order to obtain acceptable dates.

Council was then requested to adopt a policy with reference to permitting allied and other groups to use the Conference Room in the new headquarters building. Mentioned was the fact that already four groups have requested permission to use the room for their monthly meetings. Dr. Warthen told of the procedure followed by the Richmond Academy of Medicine and thought perhaps the Society might well do something similar. This would mean charging a moderate custodial fee to pay the janitor for opening and closing the building and also to defray what overhead might be involved. It was then moved that use of the Conference Room be limited to those groups whose members are also members of The Medical Society of Virginia. Use of the room by the Woman's Auxiliary was, of course, also approved. This motion was adopted.

It was then moved that a fee of ten dollars per meeting be charged those groups using the Conference Room. This motion carried.

Presented next was a request from the Virginia Medical Service Association that the Society grant it permission to use the phrase "The Blue Shield Plan of The Medical Society of Virginia". While there was no great objection to the request, there was some feeling that perhaps the word "the" should not be used since the Richmond Blue Shield Plan does not cover the entire state. It was then moved that the phrase be amended to read "A Blue Shield Plan approved by The Medical Society of Virginia". The motion carried.

A letter from the Arthritis and Rheumatism Foundation was then read and Council was requested that approval be granted a registration project designed to seek out the many unknown arthritics in the state. It was mentioned that the survey would be conducted by local drug stores. A motion was made that approval be granted. During the ensuing discussion, however, it was pointed out the request indicated that the survey would also be used as a means of publicizing the Foundation and perhaps the Society should move cautiously. Brought out was the fact that during recent weeks there have been indications of growing conflicts between organizations working in the same fields. The original motion for approval was withdrawn and a new motion that no action be taken on the request was adopted.

A resolution which would permit the Society to apply to the Mutual Assurance Society of Virginia for fire insurance in the amount of $5,000 was then approved. The Mutual Assurance Society is one of the older companies in Virginia and has, through its policy of being most selective, enjoyed the best possible experience. Unfortunately, they are not permitted to cover any non-residential property for more than $5,000. It should be mentioned that the Society has an additional $59,000 insurance with another company.

The work of the Sub-Committee on Prepaid Hospital and Medical Insurance was discussed and Council was pleased to learn of the fine job it has been doing. It was specifically requested that this Sub-Committee be approved as the Society's official liaison committee to the insurance industry. The Sub-Committee would be particularly concerned with problems connected with major medical coverage. It was moved and passed that this approval be granted.

Dr. Rawles then commented on the great utilization of both Blue Cross and Blue Shield and stated that both Plans were faced with serious problems. The need for a solution is urgent. It was moved and adopted that the Sub-Committee on Prepaid Hospital and Medical Insurance be requested to look into the matter and make such recommendations as it believed advisable.

Next to be considered was a resolution from the Rockingham County Medical Society which would have The Medical Society of Virginia lend itself to a movement designed to have a roadside highway marker erected near the site of the first successful Caesarean section performed in North America. It was moved and passed that the resolution be adopted.

There being no further business, the meeting was adjourned.

House of Delegates

First Session

The House of Delegates of The Medical Society of Virginia met in the Ballroom of the Hotel Jefferson, Richmond, Virginia, on Sunday, October 12, and was called to order at 8:00 P.M. by Dr. Harry C. Bates, Jr., President.

Dr. Bates welcomed the delegates to Richmond and requested a report from the Credentials Committee. Dr. Ira L. Hancock, Committee Chairman, reported a quorum present.

The President then introduced Dr. Fletcher J. Wright, Jr., Vice-Speaker of the House, who presided in the absence of Dr. John T. Hundley.

Minutes of the 1957 Meeting of the House of Delegates were approved as published in the De-

cember, 1957 issue of the Virginia Medical Monthly.

Mrs. John R. St. George, President of the Woman's Auxiliary to The Medical Society of Virginia, addressed the House and told of the Auxiliary's interest in medical schools and of its determination to help preserve the freedom of medicine.

The Society's delegates to meetings of allied organizations were then recognized. Dr. Warthen had represented the Society at the annual meeting of the Virginia Pharmaceutical Association and Dr. Hamner had served as delegate to the annual meeting of the Virginia Academy of General Practice.

The Speaker recognized the following visiting delegates: Mrs. Virginia Campbell, Virginia State Nurses Association; Mr. Charles Green, Virginia Pharmaceutical Association; Mr. J. R. B. Hutchinson, Jr., and Mr. Dean McKnight, Student AMA Chapter, University of Virginia; and Mr. Spencer Albright, Mr. Wilson Kolmer and Mr. Ira L. Hancock, Jr., all from the Student AMA Chapter, Medical College of Virginia.

Dr. Wright then appointed delegates from each congressional district to assist in the appointment of a nominating committee. These delegates met with the delegations from their districts during a short intermission which followed.

The Speaker introduced Dr. John Winebrenner, Regional Medical Administrator of the United Mine Workers Health and Welfare Fund.

The Committee on Nominations was announced as follows:

1st District: Frank Kearney, M.D.
2nd District: Mallory Andrews, M.D.
3rd District: Webster P. Barnes, M.D.
4th District: James L. Hamner, M.D.
5th District: W. N. Thompson, M.D.
6th District: Harry B. Stone, Jr., M.D.
7th District: Charles L. Savage, M.D.
8th District: McLemore Birdsong, M.D.
9th District: J. C. Moore, M.D.
10th District: John T. Hazel, M.D.

Dr. Walter A. Porter, Chairman of the Finance Committee, was recognized for the purpose of presenting the proposed budget for fiscal 1958-59 as recommended by Council. It was moved that the report of the Committee be accepted and that the budget be adopted. The motion carried.

The budget, as approved, is listed below:

BUDGET—1958-1959

Executive Office	
Salaries	$27,785.00
Telephone & Telegrams	1,550.00
Postage	1,250.00
Stationery and Supplies	1,000.00
Office Equipment—Repairs & Replacements	800.00
Building Maintenance	3,400.00
Building Repairs	100.00
Convention Expense	1,000.00
Council & Committee Expense	2,500.00
Delegates to AMA	1,600.00
Executive Assistant	350.00
President's Expenses	1,000.00
Traveling Expense	1,700.00
Virginia Medical Monthly	36,000.00
Scientific Exhibits	2,500.00
Legal Expenses	2,000.00
Walter Reed Commission	500.00
Woman's Auxiliary	100.00
Membership Dues—Affiliated Agencies	205.00
Editor—Virginia Medical Monthly	600.00
Special Appropriations:	
Virginia Council on Health & Medical Care	3,000.00
American Medical Education Foundation	3,000.00
National Society on Medical Research	150.00
Sub-Committee on Rural Health	500.00
Student AMA	200.00
Social Security Taxes	500.00
Miscellaneous	600.00
Virginia League of Nursing	175.00
Public Relations:	
Conference Expenses	500.00
Radio & Press	600.00
Literature & Bulletins	200.00
Exhibits & Miscellaneous Projects	100.00
TOTAL	$95,465.00

The Speaker reported on the afternoon meeting of the Council and acquainted the House with the major hospital insurance plan recommended for the membership, the recommendation that delegates to the American Medical Association be granted full membership in the Council and House of Delegates and the matter of authorizing the Virginia Medical Service Association to use the phrase "A Blue Shield Plan approved by The Medical Society of Virginia".

Dr. Edward E. Haddock, Chairman of the Liaison Committee to the Virginia State Bar Association, was recognized for the purpose of commenting on the "Standards of Principles Governing Lawyers and Physicians". Dr. Haddock strongly urged the adoption of these "Principles" and introduced Mr. Alex Parker of the Bar Association who expressed the interest of lawyers and their desire to bring about a better working relationship with the medical profession.

A report on Traffic Safety was then received from Dr. Fletcher D. Woodward and may be found in the December issue of the Virginia Medical Monthly.

The following committee reports, published in the October 1958 issue of the Virginia Medical Monthly, were then received: Executive Secretary-Treasurer; Delegates to the AMA (Dr. Archer urged everyone to attend the 1959 AMA Meeting in Atlantic City); Medicare Advisory; Judicial (referred to Reference Committee); Editorial Board; Medical Service (referred to Reference Committee); House; Scientific Exhibits and Clinics; Ethics; Mediation; Membership; Public Relations; Advisory to Woman's Auxiliary; Liaison to United Mine Workers Welfare Fund; National Legislative; Principles and Policies (referred to Reference Committee); Conservation of Hearing; Insurance, and Mental Hygiene.

Dr. Hazel presented a supplemental report for the Committee on Federal Medical Services and alerted the House to new threats to the free practice of medicine. Dr. King spoke for the Headquarters Building Committee and urged everyone to visit the new headquarters on Dover Road.

Also received were reports from the following committees: Child Health; To Study Future Vaccine Programs (referred to the Reference Committee), and Specific and Chronic Diseases (supplemental report including a resolution on chest x-ray surveys and a resolution urging poliomyelitis immunizations was presented by Dr. Barney and referred to the Reference Committee).

Accepted next was the report of the Liaison Committee to the State Board of Nurse Examiners. Dr. Mapp urged that physicians do everything possible to assist with the instruction of student nurses and also to aid in recruiting.

The report of the American Medical Education Foundation Committee was accepted and Dr. Watson introduced a resolution bearing on the Committee and its work. The resolution was referred to the Reference Committee.

Reports were than accepted from the Committees on Radiation Hazards, Maternal Health and Rehabilitation.

Dr. Harris reported the activities of the recently appointed Committee on Medical Education and introduced a resolution which would appoint a committee to study problems having to do with licensing of physicians in the State. The resolution was referred to the Reference Committee.

Reports were also accepted from Liaison Committee to the State Department of Public Welfare (published in the December issue) and the Program Committee.

The Speaker then called for new business and Dr. Ball moved that the Executive Secretary be instructed to write Dr. John T. T. Hundley and Dr. Lloyd B. Burk letting them know that they were missed and wishing them quick recoveries. The motion was adopted unanimously.

Resolutions introduced by the following delegates were referred to the Reference Committee.

Dr. G. Edward Calvert—Resolution requesting House to approve extension of social security coverage to medical profession.

Dr. John C. Watson—Resolution requesting special committee to study means of developing and financing program of postgraduate education designed to meet changing needs of the people and their care in community hospitals.

Dr. Horace E. Kerr—Resolution requesting approval of action taken by the Northern Neck Medical Society recommending direct payment of physicians by local welfare departments rather than by individual patients.

The following resolution, introduced by Dr. Roy M. Hoover, was adopted unanimously:

> In consideration of his dedicated and unselfish work for the cure of those suffering from one of our long time major medical problems, tuberculosis, and his untiring efforts to return them to the normal social and economic life of the community, Be It Resolved that The Medical Society of Virginia very strongly recommend Dr. Frank Stafford of Charlottesville, Virginia, for the President's Award as the Physician who has contributed most toward the Employment of the Handicapped.

An invitation from the Norfolk County Medical Society to hold the 1960 Annual Meeting in that area was deferred until the second session of the House.

There being no further business, the meeting was adjourned.

Second Session

The second session of the House of Delegates of The Medical Society of Virginia was called to order by Dr. Harry C. Bates, Jr., President, at 4:00 P.M., Tuesday, October 14, 1958 in the Flemish Room of the Hotel Jefferson.

Dr. Richard E. Palmer, member of the Credentials Committee, reported a quorum present.

Dr. Bates then turned the meeting over to Dr. Wright, Vice-Speaker, who recognized Dr. Mallory Andrews, Chairman of the Committee on Nominations. Dr. Andrews submitted the following nominations:

President-Elect: Allen Barker, M.D.

First Vice-President: Guy W. Horsley, M.D.

Second Vice-President: James M. Peery, M.D.
Third Vice-President: McLemore Birdsong, M.D.
Speaker of the House: John T. T. Hundley, M.D.
Vice-Speaker of the House: Fletcher J. Wright, Jr., M.D.
Executive Secretary-Treasurer: Robert I. Howard

It was then moved that that portion of Article VI, Section 1 of the By-Laws relating to the election of officers be dispensed with and that the vote be by voice. The motion was carried. A vote was then taken and those nominated by the Committee were elected unanimously.

Received next were the following nominations for Councilors from the even districts:

2nd District: K. K. Wallace, M.D.
4th District: Fletcher J. Wright, Jr., M.D.
6th District: Alexander McCausland, M.D.
8th District: Byrd S. Leavell, M.D.
10th District: Richard E. Palmer, M.D.

The above named were elected unanimously.

The following nominations from the 5th District for the State Board of Medical Examiners were received: Dr. Snowden C. Hall, Jr., Dr. J. J. Neal, and Dr. Walter A. Porter. It was moved that these nominations be accepted and submitted to the Governor for his consideration. The motion carried.

The Speaker then requested nominations for a delegate and alternate to the American Medical Association. It was explained that the term of Dr. Vincent W. Archer would expire on December 31. Those nominated were Dr. Harry C. Bates, Jr., Dr. Malcolm H. Harris, and Dr. Archer. Dr. Bates requested that his name be withdrawn from consideration. The vote was by ballot and Dr. Archer was reelected with Dr. Harris serving as his alternate.

The report of the Reference Committee was then presented by the Speaker. The Committee recommended that the major hospital and business overhead plans proposed by the American Casualty Company be approved. It was moved and adopted that the recommendation be accepted.

The Committee recommended that delegates to the AMA be granted full membership in the Council and House of Delegates and that the By-Laws be amended accordingly. The Committee's recommendation was adopted.

Approved also was the Committee's recommendation that the Virginia Medical Service Association be authorized to use the phrase "A Blue Shield Plan approved by The Medical Society of Virginia".

The recommendations of the Reference Committee with reference to proposed amendments to the By-Laws were considered. It was the Committee's recommendation that the proposed amendment to Article II, Section 1 (providing $15.00 dues for a 5 year period immediately after physicians enter active practice) be referred back to the Judicial Committee for re-consideration. It was brought out that the problem is quite complex and perhaps needs further clarification. The recommendation was adopted.

The Committee recommended that the proposed amendment to Article VII, Section 4 (having to do with presidential appointments and their terms of office) be adopted. It was explained that the adoption of this amendment would permit the provisions of Section 4 to conform with similar provisions of the AMA. The Committee's recommendation was adopted.

The House then heard a recommendation that the "Standards of Principles Governing Lawyers and Physicians" be adopted as published in the Virginia Medical Monthly. It was then moved and passed that the "Standards" be adopted.

A motion was then introduced to appropriate $200.00 for the purpose of helping defray the cost of printing and distributing copies of the "Standards" to the physicians and lawyers of the State. The motion carried.

It was the recommendation of the Reference Committee that the following three resolutions contained in the report of the Medical Service Committee be adopted:

(1) Be It Resolved, that The Medical Society of Virginia lend its efforts to the passage of a second injury law.

(2) Be It Resolved that The Medical Society of Virginia be notified that the Medical Service Committee advocates an Industrial Health Conference between members of the medical profession and the members of various industries in the State with the idea that such a health conference be sponsored by the medical profession and the members of various industries in the State.

(3) Be It Resolved that the Sub-Committee on Prepaid Hospital and Medical Insurance be appointed as the Committee to which all questions concerning health insurance, complaints by insurance companies, doctors or patients, should be referred, and that in addition, this Sub-Committee be empowered to consult with the Virginia Committee of the Health Insurance Council, for help and assistance in any of its problems and further, that any problem or complaint may be referred to the Grievance Committee of a local medical society if this should be necessary.

These resolutions were adopted.

The recommendations of the Committee on Principles and Policies were considered and it was voted to approve all of them with the exception of number 5 and number 6 (these provided that the principles and policies be written into the Constitution of the Society and that a study be made of the feasibility of incorporating the principles and policies into the Medical Practice Act). It was moved and passed that the recommendations of the Committee be adopted.

The report of the Committee to Study Future Vaccine Programs was considered and the Committee recommended that four amendments be made. Under that portion of the report entitled "the areas of greatest concern", it was recommended that paragraph 1 be amended to read as follows:

"Clinics for mass immunization have been set up by lay organizations and groups not suitably trained for such activities. Many of these so-called clinics have been conducted with inadequate medical supervision."

Paragraph 3 was amended by striking out a reference to the State Department of Health and reads as follows:

"Many of the component societies are disturbed by the sometimes unfair distribution of vaccine. Available immunizing agents have frequently in the past, been stock piled by the Federal Government and distribution has been inequitable."

Item B under paragraph 5 was amended to read as follows:

"When necessary to prevent an epidemic."

Item D under paragraph 5 was amended by striking out the word "regularly" and made to read as follows:

"The protection of employees or members of an organization when the physician giving the immunization is employed by the organization."

The amendments proposed by the Committee were adopted.

It was then recommended by the Committee that the following resolution, introduced by Dr. Barney, be adopted:

WHEREAS:

1. It has been shown by extensive investigation and usage that the Salk vaccine for poliomyelitis is effective in lowering the incidence of paralytic poliomyelitis.

2. There is a laxity on the part of the general public in securing the three injections of poliomyelitis vaccine for immunization.

3. The number of cases of poliomyelitis in Virginia has increased this year in comparison to last year.

WE, THEREFORE, MOVE that The Medical Society of Virginia continue to encourage all people from the ages of three months to forty years to make every effort to receive the recommended three injections of poliomyelitis vaccine, and use every effort available to publicize this recommendation.

The motion carried.

Also adopted was the following resolution, introduced by Dr. Barney:

WHEREAS:

1. Tuberculosis is still a serious public health problem in Virginia.

2. An Advisory Committee to the State Health Commissioner has recommended an intensive program of case finding in certain groups in which the incidence of tuberculosis is high.

3. Periodic chest x-ray screening of adults in such groups is still the best method of diagnosing suspect cases before they become highly contagious.

4. The public has often tended to become apathetic to continued case finding efforts and to become unduly apprehensive concerning recently publicized possible radiation effects involved in medical x-ray procedures.

5. This committee believes that the danger in failure to detect certain serious conditions including tuberculosis and cancer greatly outweighs any possible radiation hazard involved with properly taken x-ray films.

WE, THEREFORE, MOVE that The Medical Society of Virginia endorse the continuation of chest x-ray surveys in accordance with the recommendations of the State Health Commissioner with special emphasis on the older population, on those who have not had chest x-rays in recent years, and all special smaller groups with recognized high incidence of tuberculosis.

WE FURTHER MOVE that The Medical Society of Virginia urge all local societies to fully cooperate with official health agencies in promoting and carrying out all such surveys that will best meet the needs of the various localities.

It was then moved and passed that the following resolution, introduced by Dr. Watson, be adopted.

RESOLVED THAT (1) the small AMEF Committee of The Medical Society of Virginia be continued to work with local AMEF chairmen, and (2) that at least one meeting of the State Committee local chairmen, and AMEF officials from Chicago, be held each year, and (3) that members of the House of Delegates make every effort to see that local societies in their areas appoint local AMEF chairmen.

The following resolution, sponsored by the Alexandria Medical Society, was then adopted:

Whereas, the increasing difficulty of continuing resident training in community hospitals constitutes a crisis threatening to eliminate the teaching functions of the community hospitals, with the consequent lowering of the quality of medical care delivered to a large proportion of the residents of the State; and

Whereas, the two medical schools in the State are already pursuing programs of teaching at post graduate levels and there exists an opportunity to widen their base to reach the community hospitals, thereby becoming an outstanding influence in the improvement of both the intensity and quality of teaching activity;

Be It Therefore Resolved, that the House of Delegates instruct its President to appoint a committee which shall have representation from this Society and from the two Schools of Medicine. The task of this Committee shall be the study of the means of developing and financing a program, by appropriate legislative means, of post graduate education in order to meet the changing needs of the people of Virginia, and their care in community hospitals.

The Reference Committee next recommended that a resolution sponsored by the Northern Neck Medical Society concerning methods utilized by local Welfare Departments for payment of fees be referred to the Liaison Committee to the Department of Public Welfare. The Reference Committee will continue to seek an acceptable method of payment. The recommendation of the Reference Committee was adopted.

Dr. Wright then reported that the resolution introduced by Dr. Harris had been amended slightly and that the Reference Committee recommended its approval in the following form:

Be It Resolved That since this Committee feels close liaison is needed between The Medical Society of Virginia, the medical schools, and the State Board of Medical Examiners, a special committee of The Medical Society of Virginia be appointed to study those problems relating to the licensing of physicians in Virginia and make such recommendations as it believes advisable.

Be It Further Resolved that the Committee include representatives from both medical schools, the State Board of Medical Examiners, and The Medical Society of Virginia.

The House adopted the resolution as amended.

The House was then advised of a problem which had developed with reference to proper seating of a delegate. The question involved was whether or not delegates should be seated by districts or by component societies. It was brought out that in some instances, two or more districts are represented within a particular society. The Speaker reported that the Reference Committee has recommended that the question be referred to the Judicial Committee for clarification. The recommendation was adopted.

Considerable discussion attended the Reference Committee's recommendation that the resolution calling for an extension of social security coverage to physicians not be adopted. A motion was introduced calling for approval of the Committee's recommendation. A substitute motion was then offered calling for the resolution to be tabled until a well conceived educational campaign could be conducted and a poll of the membership taken. After further discussion, a motion was adopted that the debate be closed. The substitute motion was then voted on and defeated. The original motion to accept the Reference Committee's recommendation carried.

The House then held an election to select the "General Practitioner of the Year in Virginia". Before the actual voting took place, a question was raised concerning the advisability of continuing these elections and it was moved that the custom of selecting a "General Practitioner of the Year" be abandoned. Brought out was the fact that the election poses a number of difficult problems and a number of states have decided to eliminate such elections. This motion was ruled out of order but another motion was immediately introduced calling for the suspension of rules in order that the matter could be voted on immediately. The motion for suspension was adopted. A new motion was then offered calling for the question to be tabled until the next meeting of the House. The motion carried.

Voting on the three nominees then took place and Dr. Tivis C. Sutherland was officially pronounced "General Practitioner of the Year in Virginia".

Dr. Mallory Andrews extended an invitation on behalf of the Norfolk County Medical Society for The Medical Society of Virginia to hold its 1960 Annual Meeting in the Norfolk area. Dr. Wallace requested that the Norfolk County Society be permitted to select the exact time and location. It was then moved and passed that the 1960 Meeting be held in the Norfolk area and that the Norfolk County Medical Society be permitted to select the time and location. The motion carried.

It was brought out that the Society is encountering some difficulty in obtaining acceptable dates for its meetings and that perhaps plans should be made as much as three years ahead. Dr. Zylman then extended the Society an invitation to meet in the

Washington area in 1961. It was moved that the Council be authorized to look into various meeting possibilities and to discuss the 1961 meeting during its mid-winter session. The motion was adopted.

Dr. Salley then introduced the following resolution which was adopted unanimously.

Be It Resolved That The House of Delegates of The Medical Society of Virginia commend our host committee of the Richmond Academy of Medicine for its efforts in connection with the 111th Annual Meeting,

Be It Further Resolved That the House extend its sincere thanks to the Staff and employees of the Hotel Jefferson for their part in making this meeting an extremely pleasant and successful one.

Dr. Salley then introduced a second motion calling for the House to express its appreciation of the excellent work done by Dr. Wright as Vice-Speaker.

The motion was adopted unanimously.

There being no further business, the meeting was adjourned.

Robert I. Howard
Executive Secretary

APPROVED:
Harry C. Bates, Jr., M.D.
President

Life Members—"Fifty Year Club Members"—1958

Meade Stith Brent, M.D., Heathsville
Charles Edward Conduff, M.D., Roanoke
Samuel Clarence Couch, M.D., Cleveland
Samuel Clinton Draper, M.D., Wytheville
Eugene Conway Eggleston, M.D., Richmond
Frank Spencer Givens, M.D., Roanoke
German Smith Hartley, M.D., Clifton Forge
Edmund Horgan, M.D., Winchester
Berkley Hancock Martin, M.D., Richmond
Guy M. Naff, M.D., Emporia
Bickerton Lewis Phillips, M.D., Richmond
David Luther Rawls, M.D., Suffolk
Albin Millard Saunders, M.D., Norfolk
George W. Skaggs, M.D., Dublin
Tivis Colley Sutherland, M.D., Haysi

Members Whose Deaths Have Been Reported Since 1957 Meeting

Lloyd C. Agnew, M.D.
W. E. Brown, M.D.
Noland M. Canter, M.D.
Loren E. Cockrell, M.D.
J. C. Cutler, M.D.
C. S. Dodd, M.D.
C. E. Foley, M.D.
R. Finley Gayle, Jr., M.D.
Thomas Leon Grove, M.D.
R. L. Hillman, M.D.
B. A. Hord, M.D.
J. Meriwether Hurt, M.D.
A. D. Hutton, M.D.
Bernard H. Kyle, M.D.
L. K. Leake, M.D.
E. A. MacCornack, M.D.
L. Freeland Magruder, M.D.
J. L. Mann, M.D.
Chas. F. McCaffrey, M.D.
Alexander McLeod, M.D.
R. A. Morison, M.D.
G. Edward Mowry, M.D.
Dan O. Nichols, M.D.
Thomas E. Painter, M.D.
F. W. Poindexter, M.D.
George H. Reese, M.D.
W. McMath Revercomb, M.D.
R. M. Reynolds, M.D.
W. R. Rogers, M.D.
H. Cowles Rucker, M.D.
M. B. Savage, M.D.
J. W. R. Smith, M.D.
J. F. Stover, M.D.
Herbert W. Swertfeger, M.D.
E. V. Valz, M.D.
Douglas VanderHoof, M.D.
Foy Vann, M.D.
Samuel A. Vest, M.D.
Samuel Weinstein, M.D.
W. M. Winn, M.D.
Robert Wright, Jr., M.D.
Francis L. Zinzi, M.D.

Traffic Safety

The committee on traffic safety of the Medical Society of Virginia, composed of Dr. Allen Barker, Roanoke; Dr. Charles Frankel, Charlottesville; Dr. DuPont Guerry, III, Richmond; and Dr. John Meredith, Richmond, would like to propose, through its chairman, Dr. Fletcher D. Woodward, Charlottesville, the following suggestions to the Advisory Committee of the Governor's Highway Safety Committee for study by its executive council and if approved transmission to the Governor's Highway Traffic Safety Committee for further study.

We believe that if the following suggestions are employed the present day number of highway fatalities and injuries will be substantially reduced, perhaps by one half, and many of the 20% of injuries now classified as from severe to critical will be changed to those of a minor nature.

(1) Since fifty or more per cent of highway crashes causing death concern a drinking driver, we feel that it is the number one problem to be solved. To this end we propose that (a) a chemical breath test be mandatory in all cases where driving when drinking (not intoxicated) is suspected. This test would free the innocent as well as help convict the guilty. The alternative to such a law is the implied consent law as has been provided in New York and other states. (b) The result of the chemical test should be accepted as evidence. (c) The critical blood level should be 0.05% instead of 0.15%. The present

laws exonerating one with a blood level of less than 0.05% are proper. There should be a new set of laws to punish the drinking driver, those from 0.05% to 0.15% less stringent than those for the driver higher than 0.15%. The laws for both offenses should be harsher, mandatory and carry from one to thirty days in jail.

(2) Since speed and reckless driving are concerned with 30% or more of our deaths, we suggest more state police, tougher laws that are mandatory, and endorsement of the highway speeds suggested by the National Safety Council, roughly 60 M.P.H. for day, 55 M.P.H. at night and 35 M.P.H. in urban zones, all with a 5 M.P.H. tolerance.

(3) A study of the minimum safety features recommended by the Roberts Congressional Committee, the American College of Surgeons and other responsible groups as standard rather than optional equipment on cars sold in interstate commerce, these features to include such things as safety belts (the one best item in prevention of deaths and injuries), safety door locks, safe steering assemblies, crash padding, recessed instruments, etc., to mention only a few.

(4) The establishment of referral clinics staffed by physicians appointed by the local county medical society, psychologists and consulting specialists. This group would examine those referred to it by the Traffic Court Judge (such as repeat offenders), the police, and other physicians, those past sixty-five years of age at the time of their annual examination, and all passenger carrying drivers, including school bus drivers.

(5) That three classes of driver's permits be issued: (a) private vehicles the most lenient one as regards physical standards—these drivers to be re-examined every three years. (b) commercial vehicle drivers requiring a higher standard of physical and mental fitness and re-examination every year. (c) passenger carrying vehicle drivers a still higher standard of physical and mental fitness, to include school bus drivers, and re-examination every year. (d) the present plan of notification every three years and automatic reissue of permits be abandoned.

(6) That fully accredited driver training schools be established by the State Board of Education in all public, private and parochial schools, and such schools also be provided for the public. The curriculum of these schools should include behind the wheel instruction. Among the subjects taught should be the value of seat belts and the danger of drinking and driving. A license to drive could be issued to those sixteen years old when presenting a certificate from such a school, otherwise, the legal age should be eighteen years.

(7) That the new laws of Michigan, Illinois and Connecticut be studied as examples for adoption by Virginia.

(8) That a point system be provided.

(9) That more emphasis be placed on education. This applies not only to our youth but to the legislator, the judge, the physician and the public at large.

(10) Our committee would be pleased and honored to discuss any of these proposals in more detail if requested.

Fletcher D. Woodward, M.D.,
Chairman

Liaison Committee to The Department of Public Welfare

The Department of Public Welfare of the State of Virginia expends annually about four million dollars for indigent medical care under the following headings.

1. Old Age Assistance
2. Aid to the Blind
3. Aid to Dependent Children
4. Aid to the Permanently and Totally Disabled
5. General Relief
6. Foster Care
7. Aid to so-called medically indigent

The federal government also contributes between four and five hundred thousand dollars at present and this has been increased in recent years annually. In order to receive federal funds, it is ncessary for the Department of Welfare to comply with certain federal regulations regarding payments to and for indigents. To date the matter of matching and method of payment has been worked out for nursing homes in keeping with the recent revision of the Federal Security Act.

The next sphere in which the Department of Welfare hopes to move would be to set up some sort of arrangement regarding drugs for these patients and later some policy regarding medical care. At present medical care throughout the state is administered to indigent patients eligible for public assistance by various methods depending upon local conditions and traditions. It seems to be the feeling of the Department of Welfare that this variation throughout the state would probably continue and should really be encouraged rather than having a standard method for all localities of the state. It felt, however, that some method should be worked out in which the physician receive some payment for services rendered welfare patients. It was proposed that perhaps this could be worked out best by having a pilot project set up in one of the rural counties and learn from this experiment what was the most satisfactory way of carrying out these payments. Mr. Painter of the Department of Public Welfare stated that he would welcome from The Medical Society of Virginia any advice they might care to offer on this subject.

Again your chairman brought up the importance of seeing to it that the Medical College of Virginia and the University of Virginia not be shut off from adequate patients for teaching purposes. It was suggested that perhaps zones or areas that are traditionally covered by these institutions be firmly fixed to these institutions, whereas other areas of the state who were too far to use the facilities of teaching hospitals could have their own set up.

In response to a question by the chairman, Mr. Painter stated that the new Social Security Act changes might very well lead soon to hospitalization of the aged, that is those over sixty-five, at the expense of the federal government. In a sense if this occurred it would alter appreciably, and perhaps lighten, the load of the state's responsibility in the care of the indigent aged.

Mr. Bruner, representing the Department of Welfare and Institutions, also participated in the discussion. Both Mr. Painter and Mr. Bruner seemed of the opinion that matters of this nature should be handled slowly and de-

liberately, and they seemed to want the profession to be informed of their problems and to feel free to make any suggestions in the management of the relationship of the physician to the department and its clients.

In view of the increasing impact of the federal government on state indigent programs it becomes increasingly important for the profession to be informed about changes and alerted as to the danger of further federal encroachment into the field of medical welfare.

George B. Setzler, M.D.
Kinloch Nelson, M.D.
A. L. Carson, M.D.
H. B. Mulholland, M.D.
John P. Lynch, M.D., *Chairman*

Maternal Health

The Committee on Maternal Health of The Medical Society of Virginia met March 12 and August 2, 1958 with all members present at the first and eleven members present at the second meeting.

A discussion of the Maternity Hospital Law resulted in the appointment of a sub-committee to assist the State Department of Health in determining the adequacy of licensed sub-standard institutions for maternity care. A sub-committee was appointed at the same time to study the present law regarding the requirements to practice midwifery and to recommend such changes as may be indicated.

The Maternal deaths that had been surveyed by the Bureau of Maternal and Child Health of the State Department of Health were submitted, without identification, to the committee for review and classification. A report of the Committee is to be made to the physician concerned with each case.

At the second meeting the Committee recommended that the act of the sub-committee be broadened so that it may recommend changes, if any, for improving the standards of hospitals and then the committee on Maternal Health may recommend to the State Medical Society and to the State Department of Health such changes as may be indicated in the present Maternity Hospital Law.

The statistical report regarding Maternal Deaths and Hospital and Midwife deliveries is to be presented to the Virginia Obstetrical and Gynecological Society at the time of the meeting of The Medical Society of Virginia.

The Committee went on record as approving the Governor's commission to study the problem of illegitimacy.

Mason C. Andrews, M.D.
James J. Dunne, M.D.
E. S. Groseclose, M.D.
W. J. Hagood, M.D.
George S. Hurt, M.D.
K. Charles Latven, M.D.
John J. Marsella, M.D.
C. L. Riley, M.D.
L. L. Shamburger, M.D.
W. N. Thornton, M.D.
H. H. Ware, Jr., M.D.
A. Tyree Finch, M.D., *Chairman*

Alcoholism

Each of the two planned meetings for the full committee had to be cancelled because of severe snowstorms.

Most of the activities of this committee took place at local levels, such as speaking engagements before civic clubs, men's clubs (churches), ministerial unions, and Alcoholics Anonymous.

Two members (Dr. Ebbe Hoff and I) attended the 4th Annual North Conway Conference, North Conway, New Hampshire, the week of June 16-20. In fact, Dr. Hoff was moderator of this symposium and presented a paper.

The general theme of this seminar is education regarding alcohol and problems of alcoholism. The theme this year was "The Church's Concern for the Alcohol Education of its People". The speakers were state directors of alcohol education, other leading educators, and outstanding theologians in this field.

Most of this work has to be done at local, district, or diocesan levels. We are attempting to educate the ministers for counseling with alcoholics and their families, as much of this type work will have to be done by the clergy. An attempt has also been made to stimulate interest and sympathy from the general public.

Alcoholics Anonymous should be given recognition at every opportunity.

William S. Sloan, M.D., *Chairman*

Rehabilitation

The Rehabilitation Committee, which also serves as the Medical Advisory Committee to the Vocational Rehabilitation Services of the State Department of Education, has performed its regular functions during the past year.

Individual Committee members, representing several specialty fields and located in various parts of the state, have provided consultative services on a continuing basis to the professional staff of the Rehabilitation Service. Advice was given on many rehabilitation cases that involved complicated medical problems. The Committee gave professional guidance to the agency in developing and revising professional fee schedules and helped to develop policies regarding the provision of physical restoration services to eligible handicapped individuals.

A regular meeting of the Rehabilitation Committee was held at Woodrow Wilson Rehabilitation Center, Fishersville, on June 1, 1958. In addition to Committee members, others present were: Mr. R. N. Anderson, Director, Division of Rehabilitation; Dr. Rachael Weems, and Mr. F. O. Birdsall, representing Woodrow Wilson Rehabilitation Center; and Mr. Floyd H. Armstrong and Mr. Edward T. Justis of the State Rehabilitation Service.

During the meeting Dr. Hoover and Mr. Birdsall reported on the most recent developments at Woodrow Wilson Rehabilitation Center. A tour of the Center's Medical Department with demonstrations was provided by the departmental staff and some of the students.

Mr. Floyd H. Armstrong reported on the status of the Field Service Program of Rehabilitation in Virginia.

ROY M. HOOVER, M.D., *Chairman*
GEORGE A. DUNCAN, M.D.
J. R. BLALOCK, M.D.
LEROY SMITH, M.D.
A. L. CARSON, M.D.
G. S. FITZ-HUGH, M.D.
EDWARD E. HADDOCK, M.D.
RENO PORTER, M.D.
CHARLES L. SAVAGE, M.D.
FLETCHER J. WRIGHT, JR., M.D.
FRANK B. STAFFORD, M.D.
BENJAMIN W. RAWLES, JR., M.D.
A. RAY DAWSON, M.D.
J. TREACY O'HANLAN, M.D.
JOHN N. PASTORE, D.D.S.

AUDITOR'S REPORT

OFFICERS AND COUNCILORS
THE MEDICAL SOCIETY OF VIRGINIA
RICHMOND, VIRGINIA
GENTLEMEN:

We have made an examination of the books and records of THE MEDICAL SOCIETY OF VIRGINIA, Richmond, Virginia, for the fiscal year ended September 30, 1958, and have prepared therefrom the Balance Sheet, Exhibit "A", Statement of Surplus, Exhibit "B", and Statement of Income, Expenses and Capital Outlay, Exhibit "C". With the exceptions noted in the immediately following paragraph, our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

We did not verify the accounts receivable by direct correspondence with the debtors, nor did we verify the accounts payable. It will be noted from the balance sheet that the amounts of these items are not material in relation to the financial position as a whole.

It is our opinion that the Balance Sheet, Exhibit "A", presents fairly the financial position of the Society at September 30, 1958, in accordance with generally accepted principles of accounting. The Statement of Income, Expenses and Capital Outlay, Exhibit "C", is prepared on a basis of cash actually received and disbursed.

Yours very truly,
MITCHELL, WIGGINS & COMPANY
By CHARLES W. ANDERSON
Certified Public Accountant

BALANCE SHEET

September 30, 1958

ASSETS

GENERAL FUND		
Cash in banks		$ 54,466.41
Accounts receivable:		
Dues from members—Estimated collectible value—1958 dues—50 @ $25.00	$1,250.00	
Advertising—Virginia Medical Monthly	5,476.18	6,726.18
Investments:		
United States Savings Bond—Present value (Scehdule 1)		19,953.50
		$ 81,146.09
PLANT FUND		
Land and buildings—At cost (Schedule 2)		$125,900.69
Furniture and equipment: (Schedule 2)		
Estimated value—October 1, 1950	$5,617.41	
Cost of acquisitions since October 1, 1950	951.65	6,569.06
		$132,469.75

EXHIBIT "A"

LIABILITIES AND SURPLUS

GENERAL FUND		
Accounts payable:		
Preparation of Medical Journal—September, 1958		$ 3,064.80
Surplus:		
Available for appropriation	$48,920.88	
Appropriated for new office building	29,160.41	
Balance—September 30, 1958 (Exhibit "B")		78,081.29
		$ 81,146.09
PLANT FUND		
Surplus invested in plant assets		$132,469.75

STATEMENT OF SURPLUS

For the Fiscal Year Ended September 30, 1958

EXHIBIT "B"

GENERAL FUND		
Balance—October 1, 1957		$125,556.61
Add:		
Increase in accounts receivable	504.97	
TOTAL		$126,061.58
Deduct:		
Increase in accounts payable	$ 403.62	
Decrease in bond interest adjustment	3,768.00	
Decrease in certificate of deposit interest adjustment	106.12	
Net cash decrease (Exhibit "C")	43,702.55	47,980.29
TOTAL		$ 78,081.29

Deduct:		
Unexpended appropriation—New office building	29,160.41	
Unappropriated balance—September 30, 1958		$ 48,920.88
Appropriated for new office building:		
Funds appropriated	$120,000.00	
Less:		
Expended for land	$22,706.58	
Expended for building	68,133.01	90,839.59
Appropriated balance—September 30, 1958		29,160.41
GENERAL FUND SURPLUS—September 30, 1958 (Exhibit "A")		$ 78,081.29

PLANT FUND

Balance—October 1, 1957	$ 68,892.68
Add: Expended for new building	65,008.01
TOTAL	$133,900.69
Deduct: Book value of furniture sold	1,430.94
Balance—September 30, 1958 (Exhibit "A")	$132,469.75

STATEMENT OF INCOME, EXPENSES AND CAPITAL OUTLAY

For the Fiscal Year Ended September 30, 1958

	Actual	Exhibit "C" Budget
GROSS INCOME		
Membership dues	$ 54,354.49	
Interest on investments	5,748.39	
American Medical Association	346.87	
Miscellaneous	404.50	
Virginia Medical Monthly:		
Advertising	$42,697.89	
Subscriptions—Non-members	347.67	43,045.56
TOTAL	$103,899.81	
EXPENSES		
Executive office:		
Salaries	$25,592.05	$26,000.00
Telephone and telegrams	1,425.87	1,500.00
Postage	901.35	900.00
Stationery and supplies	914.25	1,000.00
Office equipment—Repairs and replacement	717.38	800.00
Building maintenance and repairs—Net	1,724.33	2,600.00
Convention expense	(2,145.79)	1,000.00
Council and committee expenses	1,039.53	2,500.00
Delegates and executive assistant to A.M.A.	2,178.91	2,150.00
President's expenses	1,004.88	1,000.00
Traveling expenses	1,411.03	1,800.00
Preparation and distribution of medical journal	34,045.31	30,000.00
Scientific exhibits	2,074.00	2,500.00
Legal expenses	3,879.11	3,000.00
Walter Reed Commission	278.02	500.00
Woman's Auxiliary	100.00	100.00
Membership dues—Affiliated agencies	205.00	150.00
Editor—Virginia Medical Monthly	600.00	600.00
Special appropriations:		
Virginia Council Health and Medical Care	2,000.00	2,000.00
American Medical Education Foundation	2,000.00	2,000.00
National Society on Medical Research	150.00	150.00
Rural Health Subcommittee	500.00	500.00
Student—American Medical Association	125.00	200.00
Social security taxes	398.92	500.00
Miscellaneous	397.97	600.00
House of Delegates—Interim session	257.00	200.00
Total—Executive office	$81,774.12	$84,250.00
Public relations department:		
Conference expenses	$ 431.00	$ 500.00
Radio and press	364.23	600.00
Literature and bulletins	25.00	300.00
Miscellaneous		100.00
Total—Public relations department	$ 820.23	$ 1,500.00
TOTAL EXPENSES	$82,594.35	$85,750.00
EXCESS OF INCOME OVER OPERATING EXPENSES	$21,305.46	
CAPITAL OUTLAY		
New office building	$65,008.01	$94,168.42
EXCESS OF EXPENSES AND CAPITAL OUTLAY OVER INCOME (Exhibit "B")	$43,702.55	

PLANT FUND ASSETS

September 30, 1958

SCHEDULE 2

LAND AND BUILDINGS—At cost		
Windsor Farms, Richmond, Virginia:		
Land	$22,706.58	
Office building (Architect's fees)	68,133.01	$ 90,839.59

Office building—1105 West Franklin Street, Richmond, Virginia		34,061.10
Walter Reed House, Belroi, Virginia		1,000.00
TOTAL LAND AND BUILDINGS		$125,900.69

OFFICE FURNITURE AND EQUIPMENT

Estimated insurable value at October 1, 1950		$ 5,617.41
Purchased during the year ended September 30, 1951:		
Adding machine	$ 100.00	
Addressograph—Multigraph stand	127.50	
Protectograph—Check writer	110.30	
Typewriter	156.20	
File cabinets (2)	71.50	
Vacuum cleaner	69.95	
Desks and chairs (2)	316.20	951.65
TOTAL OFFICE FURNITURE AND EQUIPMENT		$ 6,569.06
TOTAL PLANT FUND ASSETS (Exhibit "A")		$132,469.75

FINANCIAL CONDITION

The financial condition of the Society at September 30, 1958, is shown in the Balance Sheet, Exhibit "A", on the accrual basis. A summary thereof is presented as follows in comparison with the financial condition for the two preceding years:

	SEPTEMBER 30,		
	1958	1957	1956
ASSETS			
Cash	$ 54,466.41	$ 83,218.96	$ 82,569.94
Accounts receivable	6,726.18	6,221.21	3,127.17
Investments	19,953.50	38,777.62	47,796.53
Land, buildings and equipment	132,469.75	68,892.68	43,061.10
TOTAL—ALL FUNDS	$213,615.84	$197,110.47	$176,554.74
LIABILITIES, SURPLUS AND FUND BALANCE			
Liabilities:			
Accounts payable	$ 3,064.90	$ 2,661.18	$ 1,899.45
Surplus:			
General fund	78,081.29	125,556.61	131,594.19
Fund balance:			
Plant fund	132,469.75	68,892.68	43,061.10
TOTAL—ALL FUNDS	$213,615.84	$197,110.47	$176,554.74

Analyses and explanations of the more important balance sheet accounts follow:

CASH—$54,466.41

Recorded cash receipts were accounted for by deposits in the banks and disbursements were supported by properly signed and endorsed paid checks. Balances on deposit at September 30, 1958, were verified by direct correspondence with the banks as follows:

First and Merchants National Bank—Checking account	$15,731.88
First and Merchants National Bank—Savings account	7,259.12
Bank of Virginia—Savings account	8,334.76
Southern Bank and Trust Company—Savings account	1,140.88
Franklin Federal Savings and Loan Association—Savings account	10,984.00
Richmond Federal Savings and Loan Association—Savings account	11,015.77
TOTAL	$54,466.41

INVESTMENTS—$19,953.50

United States Savings Bonds, as shown in Schedule 1, were verified by inspection of the securities held in a safe deposit box at First and Merchants National Bank, Richmond, Virginia. They are shown in the balance sheet at their current redemption value.

PLANT FUND ASSETS—$132,469.75

Details of the plant fund assets are shown in Schedule 2. No indebtedness against these assets was disclosed by the records. During the fiscal year ended September 30, 1958, $65,008.01 was expended in the erection of new office building located in Windsor Farms, Richmond, Virginia. Of the original appropriation of $120,000.00 for land, building and equipment, $90,839.59 has been disbursed.

A contract of sale for the property located at 1105 W. Franklin Street, Richmond, Virginia, was signed on September 5, 1958, to be settled on September 26, 1958. This sale had not been settled at October 3, 1958. Subject contract is contingent upon a loan being secured on the property by the purchaser. Under the contract of sale, the Society is to net approximately $23,750.00.

Furniture, having an estimated value of $1,430.94 at October 1, 1950, was sold during the year for $298.50.

OPERATIONS

The income, expenses and capital outlays for the fiscal year ended September 30, 1958, are shown in Exhibit "C", prepared on the cash receipts and disbursements basis. A summary of income, expenses and capital outlays for the current year are compared with that of the two preceding years as follows:

	FISCAL YEAR ENDED SEPTEMBER 30,		
	1958	1957	1956
INCOME			
Membership dues	$ 54,354.49	$53,363.44	$51,257.85
Medical monthly publication	43,045.56	34,314.78	24,251.73

Other income	6,499.76	2,293.25	4,169.80
TOTAL	$103,899.81	$89,971.47	$79,679.38
EXPENSES			
Executive office	$81,774.12	$71,960.49	$63,572.69
Public relations department	820.23	510.38	1,483.21
TOTAL	$82,594.35	$72,470.87	$65,055.90
INCOME OVER EXPENSES	$21,305.46	$17,500.60	$14,623.48
CAPITAL OUTLAY	$65,008.01	$25,831.58	$
EXPENSES AND CAPITAL OUTLAY OVER INCOME	$43,702.55	$ 8,330.98	$

IN GENERAL

The bookkeeping records were found to have been kept in a satisfactory manner.

Insurance in force at September 30, 1958, determined from policies on file, was as listed below:

FIRE	
Office furniture and fixtures	$14,000.00
Building—Windsor Farms, Richmond, Virginia	59,000.00
Building—1105 W. Franklin Street, Richmond, Virginia	26,000.00
Walter Reed House, Belroi, Virginia	2,000.00
LIABILITY—OWNER'S, LANDLORD'S AND TENANT'S	
Bodily injury	$25,000.00-$50,000.00
Property damage	5,000.00
FIDELITY BONDS	
Executive Secretary-Treasurer	$ 5,000.00
Secretary	5,000.00
PERSONAL PROPERTY FLOATER	
All risk—Camera	$ 400.00

INVESTMENT BONDS

SCHEDULE 1

September 30, 1958

BONDS	SERIES	NO. BONDS	DATED	DUE	MATURITY	COST	9-30-57	9-30-58
U. S. Savings	F	6	10-1-49	10-1-61	$ 3,000.00	$ 2,220.00	$ 2,583.00	$ 2,661.00
U. S. Savings	J	13	5-1-55	5-1-67	6,500.00	4,680.00	4,823.00	4,933.50
U. S. Savings	J	11	12-1-55	12-1-67	11,000.00	7,920.00	8,085.00	8,250.00
U. S. Savings	J	1	12-1-55	12-1-67	500.00	360.00	367.50	375.00
U. S. Savings	J	1	1-1-56	1-1-68	1,000.00	720.00	735.00	750.00
U. S. Savings	J	2	2-1-56	2-1-68	2,000.00	1,440.00	1,470.00	1,500.00
U. S. Savings	J	2	7-1-56	7-1-68	2,000.00	1,440.00	1,458.00	1,484.00
TOTAL					$26,000.00	$18,780.00	$19,521.50	$19,953.50

(Exhibit "A")

Current Currents

THE RECENT CONGRESSIONAL ELECTIONS have caused many of our members to speculate concerning just what effect the results might have on future legislation affecting the medical profession. It is for this reason that this issue of Current Currents is devoted to a run down on the more important medical legislation considered by the 85th Congress. The following paragraphs contain much food for thought.

FORAND BILL (H.R. 9467): This bill was, without doubt, the most important legislation of a medical nature introduced during the recent Congress. The bill would have amended Title II of the Social Security Act so as to provide hospital, surgical, nursing home and dental care for more than twelve million OASI beneficiaries. The bill was supported by AFL-CIO and a number of public welfare groups. It was vigorously opposed by medicine and most other organizations in the health field.

Although the Forand Bill was not reported out of committee, a study was undertaken of the various possibilities for financing health care for the aged, with particular emphasis on the practicability of including such a plan under OASI. The Forand, or a similar bill, will probably pose a serious problem during the 86th Congress.

MEDICARE: This program went into effect in 1956, and since that time, there has been constant pressure to reduce the utilization of civilian physicians and facilities by dependents. In fiscal 1958, approximately 90 million dollars were paid out for civilian care. The administration requested 70.2 millions for fiscal 1959. This appropriation, after a vigorous battle, was finally authorized. The effect, however, has been to restrict the civilian aspects of the program. The program will undoubtedly receive its share of attention next year.

HILL-BURTON: The program was extended by the 85th Congress for a period of 5 years (P. L. 664). In addition, the program was amended (P. L. 589) to permit loans to be made to those not wishing federal grants. Loan applicants must comply with the same regulations as those applying for grants. The American Medical Association supported the extension of the Hill-Burton program and urged the elimination of the priority for rural areas and the elimination of grants for so-called diagnostic and treatment centers.

VETERANS: No new legislation was enacted by the 85th Congress. An effort was made, however, to increase the number of VA Hospital beds.

JENKINS-KEOGH (H. R. 9 and 10): These bills would permit self-employed persons to place a portion of their annual income into restricted retirement fund. Federal income tax on these amounts would be deferred until benefits are paid after age 65. The profession has urged the passage of Jenkins-Keogh legislation since 1951. Although H.R. 10 was favorably reported by the House Ways and Means Committee and quickly passed by the House, the Senate Finance Committee decided not to hold hearings since little time remained for careful study. However, the bill was offered from the Senate floor as an amendment to the Omnibus Tax Bill. A point of order was raised and the Senate, by a vote of 52-32, held the bill was "not germane".

The fact that H.R. 10 passed the House and that 32 Senators voted for it, even though it was brought up without hearings and offered as an amendment to a bill to which it was clearly germane, indicated that it has a good chance of passage during the 86th Congress.

MEDICAL CARE FOR PUBLIC ASSISTANCE RECIPIENTS: Considerable confusion developed following the 1956 amendments to the public assistance program. These amendments set up a separate federal matching program for medical care payments. Previously, funds for medical care had been included in the general all-purpose public assistance payments. After 1956, however, the states had to elect whether to take the federal medical payments under the new program or the old. Under the 1956 amendment, further payments could only be made directly to the vendor while under the previous system payment could be made to the recipients or to vendor pools.

The AMA has held that the method of payment for medical care of indigents should be determined on the state level after negotiation with representatives of the various professions providing such services. The 85th Congress, in passing H.R. 13549, agreed with this position. Federal grants for public assistance are now made under one overall formula and it is the responsibility of the state to determine how this assistance money will be spent for the provision of medical care. Individual states may now provide for a direct payment to the vendors or, at its discretion, pay the money to the recipients as part of their public assistance payment.

FEDERAL AID TO MEDICAL SCHOOLS: Several bills were introduced in the 85th Congress providing for federal grants to medical schools. Although no final action was taken on the bills, Congress did extend the program of grants to those schools doing research in various crippling and killing diseases for the purpose of constructing laboratories and remodeling existing structures. Schools of public health were also authorized annual grants of one million dollars. These grants are to assist the schools in professional training, specialized consultant services and technical assistance with the states.

Woman's Auxiliary . . . .

President—Mrs. Charles A. Easley, Danville
President-Elect—Mrs. Walter A. Porter, Hillsville
Vice-Presidents—Mrs. George K. Brooks, Richmond
Mrs. James M. Moss, Alexandria
Mrs. W. A. Eskridge, Parksley
Recording Secretary—Mrs. Robert B. Keeling, South Hill
Corresponding Secretary—Mrs. J. J. Neal, Danville
Treasurer—Mrs. Wyndham B. Blanton, Richmond
Publication Chairman—Mrs. Custis L. Coleman, Richmond
Directors—Mrs. J. R. St. George, Portsmouth
Mrs. Lee S. Liggan, Irvington
Mrs. Maynard Emlaw, Richmond

Alexandria.

The Auxiliary to the Alexandria Medical Society held its first fall meeting on September 30th at the home of Mrs. S. R. Williams with Mrs. R. H. Anderson serving as co-hostess. Mrs. William H. Young, Jr., President, presided. Other officers for the year are: president-elect, Mrs. W. J. Brennan; recording secretary, Mrs. J. C. Ransmeier; corresponding secretary, Mrs. J. G. Brown; and treasurer, Mrs. R. Bregman.

A report was given by Mrs. J. M. Moss on the annual convention of the Woman's Auxiliary to the American Medical Association held in San Francisco in June.

The October meeting of this Auxiliary was a luncheon at Cedar Knoll Inn. Guest speaker was Mr. Malcolm D. Lamborne, Jr., co-editor in the Washington office of the American Medical Asociation.

The Auxiliary will sponsor a benefit performance of "Cinderella" on the afternoon of December 27th at Constitution Hall. The narrated ballet will be presented by the National Symphony Orchestra and the Washington Ballet. The performance will benefit the Alexandria Hospital Building Fund. Ticket information may be obtained by calling Mrs. James Gilbert at KIng 8-5659, Alexandria.

Eleanor M. Mangus (Mrs. L. E.)
Publicity Chairman

Richmond.

At the September meeting, the Auxiliary to the Richmond Academy of Medicine had as guest speaker Dr. Webster P. Barnes, president of the Academy. Following a buffet luncheon at the Branch House, Dr. Barnes spoke on the Life of Dr. G. Paul LaRoque, professor of surgery at the Medical College of Virginia until his death in 1934. Mrs. LaRoque was guest of honor.

Two members of the Auxiliary who were introduced to the group are Mrs. Joseph H. Magee and Mrs. Thomas E. Stanley.

Completed plans were announced for the state convention, October 12-14.

Mrs. J. Henry Hawkins
Publicity Chairman

Congenital Cardiac Defects

"Diagnosis of Congenital Cardiac Defects in General Practice," revised and published in October, is now available to physicians, free of charge, upon request to the Virginia Heart Association, 12 South Third Street, Richmond 19, Virginia.

This booklet was prepared for the American Heart Association and its affiliates by Regina Gluck, M.D., Assistant Clinical Professor of Pediatrics, Children's Medical Service, New York University-Bellevue Medical Center, New York.

"The remarkable advances in diagnosis and surgery of congenital heart defects have made this subject of practical importance to the family physician and his patients, although the incidence of these anomalies is low," the author pointed out. "The purpose of this booklet is to present briefly the physiology and clinical findings in common congenital cardiac defects and the indications for surgery."

The subject matter of this booklet falls under the following headings: "Patent Ductus Arteriosus," "Coarctation of the Aorta," "Aortic Stenosis," "Vascular Ring," "Tetralogy of Fallot," "Tricuspid Atresia," 'Truncus Arteriosus," "Complete Transposition of the Great Vessels," "Pulmonary Stenosis," "Ventricular Septal Defects," "Atrial Septal Defects," "Innocent (Functional) Murmurs," "Diagnostic Procedures," and "Referrals and Recommendations."

President's Message . . . .

THIS ISSUE of the Monthly is of great importance to every member. In it are reports of the recent Annual Meeting. The scientific presentations and exhibits were of high calibre and the Society is grateful to the participants. The business of the Society ran so smoothly that it is hard to realize its importance to the future practice of medicine.

It has grown clear that medico-economic changes challenge the happiness and success of the well-equipped physician. His knowledge of the science and the art of practicing medicine may be controlled by some third-party with the patient receiving poorer quality medical care. Such possible changes are many, and are being worked for with enthusiasm by many persons. These plans include third-party medicine through the labor unions or Medicare or some forms of insurance, amendments to public assistance laws, free hospitalization of the aged under Social Security, national health care for the aging, national rehabilitation plans, and many others.

The physician must help guide and control any such changes if the present quality and value of medicine is to continue. Each one of us must know how we stand and how the Society stands on such subjects. Seek information and let the appropriate committee of your Society know your ideas. The actions of the Society are guided by committees which have accomplished much in the various fields. They desire ideas and information from the membership. They know the answers to some problems, but not to others. Maybe your questions or your information on a subject would help them and in time help you.

Future medical legislation will soon be shaped by the new Congressional Committees appointed January first. During the coming term it is up to each of us to study prospective legislation concerning us, and take some stand on it. Let your local constituent society, or the State Society committee which is involved, know wherein your interest lies and how you stand. The physician electorate must speak up. Only in this way can we continue to practice the brand of medicine we consider best for our patients.

With best holiday wishes.

Walter O. Adams

President

Editorial....

What Is Happening To The Prescription?

TIME WAS when prescription writing formed an important part of the medical curriculum and was an art in which the practicing physician took laudable pride. Today it is otherwise. Gone are the boluses, the electuaries and the ursicatories. Gone is the Latin, the scruple and the dram. Gone is the elegant chirography which spelled out meticulously compounded polypharmacal mixtures, studiedly capturing the therapeutic effects of color, odor and taste and skillfully avoiding the pitfalls of many possible incompatibles. In place of all this we have what is perhaps better—the tablet, the capsule, the injectable drug, the attractive vehicle, the metric system, and the generally approved custom of prescribing a single therapeutic substance at a time.

While this whittling down of the noble prescription to a one-line order has occurred, related to it but more disturbing changes have come about. They are due largely to the rise of rich, powerful and influential pharmaceutical corporations which have used research, mass production, and advertising so effectively that the pharmacist of the corner drug store as we once knew him is a man of the past.

It is common knowledge, and fully appreciated by the medical profession, that these pharmaceutical houses perform an invaluable service to both patient and doctor. In their own research, and in their contributions to general medical research, in mass production and distribution, in the purity and potency of their products, in the lowering of the cost of medicines, they can be acclaimed as benefactors. After all, do they not form with the medical profession an inseparable relationship dedicated to a common cause?

But when all is said and done, these pharmaceutical houses are business organizations operating in a fiercely competitive field and their guiding spirit is their own. It may not always square with the sworn ethics of the medical profession. Whenever the competition felt by them among themselves produces pressures, open or insidious, upon us, it constitutes a danger to our standards. In point is the exploitation of medical students referred to in a recent editorial in the *New England Journal of Medicine.**

The Reaction of Medical Students to Drug Advertising is the title of an article published also in that journal, recently. First of all the medical students were astonished at the bulk of drug advertising. Perhaps all physicians will confess to an irritation caused by this notable feature of it, which results, of course, from the competition for business. Drug advertisements crowd the medical journals, litter our mail, and tempt us to instruct our secretaries to consign all of it to the trash basket. We recently made a modest investigation of this matter ourselves, weighing the amount received day by day for a month. Multiplying by twelve, and then by the number of doctors in the

*New England M. J. 239: 1958, pp. 121, 193.

United States, we came up with the astronomical figure of some twenty million pounds. This represents big business indeed.

The medical students were critical also of what they regarded as misleading exaggeration. In their investigation they found that the advertisements in three out of four cases overstated the virtues of the drugs in question, and, in practically all cases, minimized their toxicity and side effects. They also found that only ten per cent of the so-called new drugs were really new; and that too frequently a company rushed a product to the market before adequate clinical trial had been made.

The growing tendency to substitute trade names for official names in prescription writing was considered by the students, and contrary to their teaching and to faculty advice they, as a group, favored the use of trade names, because, they said, "the trade name insured a product of a known manufacturer which could be relied upon for purity and potency." They believed "that prescribing official names could result in the substitution of inferior products." Forty years ago, we remember, it was considered anathema to write "aspirin" for acetyl salicylic acid.

We suspected the students would have overwhelming backing if the practicing physician were polled. So we undertook a simple investigation, sufficiently accurate for the purpose in mind. Twenty representative local pharmacists were asked to express in percentage the average number of trade names used in the prescriptions that daily came over their counters. With impressive unanimity they stated that nine out of ten prescriptions used the trade and not the official name. One druggist counted his last 200 prescriptions and came up with the same percentage. The short, catchy trade name commends itself to the busy doctor of short memory with an aversion to polysyllabic technical words and with a limited chemical interest.

The doctor needs to beware lest he find himself lazily neglecting his medical journals and the guidance they afford the seeker after knowledge in the field of pharmacy and therapeutics. Real danger lurks in his slavishly succumbing to the blandishments of drug advertisers and the sales talk of the detail men. We join our sister medical journal which has brought this whole matter to our attention so ably in advising that the editorial board of every medical journal constitute a sub-committee from its members to scrutinize all their advertisements for exaggerated claims and minimized hazards. We also find ourselves wishing for a compact, loose-leaf, up-to-date formulary of officially approved drugs.

Wyndham B. Blanton, M.D.

A Christmas Gift for Alma Mater

IN HIS PRESIDENTIAL ADDRESS at the recent meeting of the Association of American Medical Colleges, Dr. Lowell T. Coggeshall, Dean of Biological Sciences of the University of Chicago School of Medicine, stated that "The time for direct Federal operational funds (for the support of medical schools throughout the United States) . . . has arrived. Indeed it is overdue." Dr. Coggeshall granted that most education is the responsibility of the states but that "Medical education and research are dependent upon schools having a national character and function." Dr. Coggeshall is not alone in this thought and increasing pressure doubtless will be brought on the Federal government to take the medical schools under its wing.

Those of us who look with disfavor upon further encroachment of the United States Government in the field of education should remember that there is one thing we can do to relieve the financial distress of the American medical schools and make Dean Coggeshall's position less tenable—and that is for us to contribute to the American Medical Education Fund.

Virginia physicians have been something less than generous in giving to the AMEF. In 1957 about one-fourth of the physicians in the State contributed $37,210 to this cause. On the other hand the two medical schools in Virginia received $97,510 from the Foundation and the National Fund for Medical Education. This means that last year we did not pull our weight in the boat.

Our giving during the first nine months of this year has been even less. Thus far only 104 Virginia physicians have contributed $4,852 directly to the AMEF. This compares unfavorably with the $7,209 contributed by 184 doctors last year. Information concerning gifts to the Alumni funds of the two Virginia medical schools is not available at this time but there is no reason to believe that they are in excess of last year's total. It is not too late to correct this inequity in Virginia. There is still time for us to forward a check to the AMEF or the Alumni fund of our medical schools. Under the present income tax schedule this means that at a considerable discount we can aid the medical schools of our choice and also make Federal control of our State schools less likely.

H.J.W.

Society Proceedings....

Virginia State Orthopedic Society.

The annual meeting of this Society was held at the Commonwealth Club, Richmond, October 13th, with Dr. J. Hamilton Allan presiding.

Dr. George G. Hollins, Jr., was elected president; Dr. William M. Deyerle, vice-president, and Dr. Richard Fisher, secretary-treasurer.

The annual Spring Scientific meeting will be held in Arlington in April 1959.

The Norfolk County Medical Society

Announces a program of Clinical Lectureships and a Spring Clinic for 1958 and 1959. There will be morning and afternoon teaching rounds at DePaul Hospital and Norfolk General Hospital with the lectureship at The Hague Club.

Dr. John F. Dammann, University of Virginia, School of Medicine, was lecturer on November 18th. Dr. Henry T. Bahnson, Johns Hopkins University School of Medicine, will be lecturer on January 20th; Dr. Julian M. Ruffin, Duke University School of Medicine, on February 17th; and on March 21st, the Annual Spring Clinic will be held at the Center Theatre.

Williamsburg-James City.

At the meeting of this Society on November 12th, Dr. C. F. Frankel, University of Virginia, spoke on the Physician's Liability to the Patient.

Northern Neck Medical Association.

At the annual meeting of this Association held at Tides Inn on October 23rd, Dr. Paul Pearson, Warsaw, succeeded Dr. Horace Kerr, Colonial Beach, to the presidency. Others elected were Dr. Harper Ward, Montross, president-elect, and Dr. Harvey Goode, Jr., Kilmarnock, secretary-treasurer.

Following a business meeting and luncheon, Drs. Edward L. Alexander, Jr., Louis Keffer and Jack A. Lawson, all of Newport News, presented the scientific program.

American Society of Internal Medicine.

Mr. Robert L. Richards, Harrisburg, Pennsylvania, has been appointed as the first full-time national executive secretary for the Society to be effective January 1959. The announcement of this appointment was made by Dr. Elbert L. Persons, Durham, North Carolina, president. The office of the Society is located in San Francisco. Mr. Richards has been serving as Assistant Executive Director of the Medical Society of the State of Pennsylvania since December 1956.

News Notes....

New Members.

The following new members have been admitted into The Medical Society of Virginia since the list published in the October issue of the Monthly:

Ronald G. Barsanti, M.D., Fairfax
Richard Bertram Blackwell, M.D., Newport News
William Everett Boyd, M.D., Norfolk
Frank Buenaventura, M.D., Alexandria
William Patrick Coleman, M.D., Lynchburg
Eugene Carl Culbertson, M.D., Pennington Gap
William Stribling Dingledine, M.D., Richmond
William Gamm Eckert, M.D., Norfolk
Marion Dees Miller Faris, M.D., Leesburg
John Happer Furr, M.D., Norfolk
Frederick True Given, Jr., M.D., Norfolk
Sixto Guiang, Jr., M.D., Clintwood
Derwin Kay Harmon, M.D., Roanoke
Allen Lee Haslup, M.D., Norfolk
William Dean Keck, M.D., Radford
Thorlejorm Johan Lassen, M.D., Warwick
Alvin Margolius, Jr., M.D., Norfolk
Bernard Herbert Miller, M.D., Norfolk
James Dalton Price, M.D., Norfolk
William Norton Reingold, M.D., Norfolk
Simon Russi, M.D., Richmond
Rudolf Franz Schuster, M.D., Norfolk
Charles Willis Sensenbach, M.D., Wise
Robert Ellsworth Stout, M.D., Hampton
Harold Lee Williams, M.D., Newport News
Doris Jane Woodward, M.D., Leesburg

The Annual Meeting.

There was a registered attendance of 1084, including 689 members, 230 ladies, 110 exhibitors and 55 students and guests, at the Annual Meeting of The Medical Society of Virginia in Richmond, October 12-14.

Dr. Walter P. Adams, Norfolk, succeeded Dr. Harry C. Bates, Jr., to the presidency. Dr. Allen Barker, Roanoke, was named president-elect; Drs. Guy W. Horsley, Richmond, James M. Peery, Cedar Bluff, and McLemore Birdsong Charlottesville, vice-presidents; Dr. John T. T. Hundley, Lynchburg, speaker of the House; and Dr. Fletcher J. Wright, Jr., Petersburg, vice-speaker. Councilors are Drs. Sheppard K. Ames, Cape Charles; K. K. Wallace, Norfolk; Benjamin W. Rawles, Jr., Richmond; Fletcher J. Wright, Jr., Petersburg; Louis P. Bailey, Nathalie; Alexander McCausland, Roanoke; Harold W. Miller, Woodstock; Byrd S. Leavell, Charlottesville; James P. Williams, Richlands; and Richard E. Palmer, Alexandria. Dr. Vincent W. Archer, Charlottesville, was re-elected a delegate to the American Medical Association, with Drs. Allen Barker and W. Linwood Ball, Richmond, holding over. Dr. M. H. Harris, West Point, was re-elected an alternate with Drs. Russell Buxton, Newport News, and Kinloch Nelson, Richmond, holding over.

Winners of awards for scientific exhibits were: 1st Award—Treatment of Club Feet in a Young Infant by Dr. Frederick W. Rook, Arlington; 2nd Award—Peripheral Vascular Disease by Dr. Eugene L. Lowenberg, Norfolk; and 3rd Award—Diagnosis and Treatment of Emotional Problems in Children by Dr. William M. Lordi, Richmond.

The golf tournament was held on the 13th, and the winner of the low gross was Dr. W. Clayton Anderson, Winchester; first low net, Dr. Leon Prince, Emporia; second low net, Dr. Leon Alexander, Smithfield; and third low net, Dr. William Tucker, Richmond.

Dr. Tivis Colley Sutherland, Haysi, was named General Practitioner of the Year.

The minutes of the Council and House of Delegates are published in this issue of the Monthly.

Wanted: Old Photos of Physicians Driving Ancient Cars

The Illinois State Medical Society is preparing an exhibit centered around an Illinois Medical Journal article which told of the role of physicians in the development of the automobile in the United States at the turn of the century.

To help illustrate this exhibit, the Society will appreciate the loan of old photographs showing physicians at the wheels of cars of 1900-1910 vintage. Scenes showing difficulties on the road, or poor highway conditions, are especially desired. Enlargements will be made of these photographs and the originals returned undamaged.

Photographs should be accompanied by a memo giving the name and town of the physician, whether living or deceased, and the make and year of the automobile. They should be sent to Mr. John A. Mirt, Illinois State Medical Society, 185 North Wabash Avenue, Chicago 1.

Fellows of American College of Surgeons.

Sixteen Virginians were among the approximately 1,100 surgeons inducted as new fellows of the College at its meeting in Chicago in October. They are:

Dr. Christopher J. Murphy, Jr., Alexandria
Dr. Joseph O. Romness, Arlington
Dr. Claude C. Coleman, Jr., Charlottesville
Dr. Martin Donelson, Jr., Danville
Dr. Charles L. Ransom, Danville
Dr. H. Lee Earnhardt, Jr., Fredericksburg
Dr. Gordon W. Jones, Fredericksburg
Dr. Cyril I. Sease, Jr., Harrisonburg
Col. Quintino J. Serenati, Langley Air Force Base
Dr. Claiborne W. Fitchett, Norfolk
Dr. Thomas L. Stokes, Norfolk
Dr. Frank B. Clare, Portsmouth
Dr. Paul W. Robinett, Portsmouth
Dr. Jacqueline M. Harrison, Richmond
Dr. Henry P. Royster, Richmond
Dr. Charles W. Caulkins, Waynesboro

Dr. Klaus W. Berblinger,

Formerly of Norfolk, and more recently being Associate Professor of Psychiatry at The Psychiatric Institute of the University Hospital, Baltimore, has been appointed Clinical Director of the Langley Porter Neuropsychiatric Institute in San Francisco. He will also join the faculty of the University of California Medical School.

Dr. Leta J. White,

Formerly of Petersburg, is now located in Gaffney, South Carolina, where she began her practice on October 1st.

Announce Association.

Drs. William Minor Deyerle and Virgil R. May, Jr., Richmond, announce the association of Dr. Edwin W. Hakala for the practice of orthopedic surgery.

"City of Candlelight"

Every Richmond area resident and businessman is being asked to help make this the "City of Candlelight" at Christmastime this year.

The project is being promoted locally by the Federated Arts of Richmond, a non-profit organization of art, drama, dance, and other cultural groups. It was conceived last year during the Christmas season by a committee of Richmond businessmen.

Stores and other business places as well as individual homeowners will be asked to cooperate in making Richmond the "City of Candlelight" by placing candles in their windows. The number, size, and design of the units is being left up to the individuals, of course, however Federated Arts is urging that only safe electric sets be used.

The candlelight idea will also be carried out by the member groups of Federated Arts in their holiday programs during November and December.

Postgraduate Training in Psychiatry.

The National Institute of Mental Health is offering grant support for a training program for general practitioners and other physicians engaged in the practice of medicine other than psychiatry. Funds are available during the current year (fiscal year 1959) for these grants and training institutions may submit applications at any time.

The program has two purposes:

I. To foster the development of postgraduate training in psychiatry for the practitioners who wish to increase their psychiatric knowledge and skills in order to be able to deal more effectively with the emotional aspects of illness generally and in order to play a more effective role in the treatment and prevention of mental illness. These courses will be designed for the physician who plans to continue practicing in his own field.

Grant support is being offered to medical schools, hospitals, clinics, and medical and psychiatric societies for the development and expansion of such postgraduate training in the form of courses, institutes, and seminars. This support does not include fees, subsistence, or travel for the physicians who attend.

Support of this type of training may be for a particular professional group over a given period, or for training offered regularly as part of the postgraduate curriculum of a medical school, hospital, or clinic, or as part of the educational program of a medical or psychiatric society.

Physicians interested in obtaining this type of training should apply to medical schools, hospitals, clinics, and medical or psychiatric societies which have, or are developing, such training opportunities.

II. To provide support at an adequate level for psychiatric residency training for physicians in practice who wish to become psychiatrists. Training stipends up to a maximum of $12,000 a year are available. The level of payment will be determined by the training institutions who will also make the award to the individual physicians. The National Institute of Mental Health will make awards of grants for this purpose to training institutions and not to individuals.

Physicians interested in support for this type of training should apply to training institutions which are approved for psychiatric residency training.

Inquiries about the program should be sent to Dr. Seymour D. Vestermark, Chief, Training Branch, National Institute of Mental Health, National Institutes of Health, Bethesda 14, Maryland.

Dr. Paul W. Bowden,

Richmond, has been appointed to the medical staff of the A. H. Robins Company. He was formerly assistant director of the city health department.

Annual Spring Congress.

The Gill Memorial Eye, Ear and Throat Hospital, Roanoke, will hold its Thirty-Second Annual Spring Congress in Ophthalmology and Otolaryngology and Allied Specialties, April 6-11. Among the guest speakers invited to attend are: Drs. Joseph P. Atkins, Philadelphia; Walter S. Atkinson, Watertown, N.Y.; Kenneth D. Bailey, Fairmont, W. Va.; William L. Benedict, Rochester, Minn.; F. Willson Daily, Roanoke; Windsor S. Davies, Detroit; Jeff Davis, New York; Francis P. Furqiuele, Philadelphia; Surgeon General B. W. Hogan, Washington; Bayard T. Horton, Rochester, Minn.; Wendell L. Hughes, Hempstead, N. Y.; John H. King, Washington; T. Keith Lyle, London, England; George T. Nager, Baltimore, Md.; Robin M. Rankow, New York; Kenneth L. Roper, Chicago; A. D. Ruedemann, Detroit; Russell A. Sage, Indianapolis; Jules G. Waltner, New York; Edgar N. Weaver, Roanoke; and Walter L. Winkenwerder, Baltimore.

Dr. Paul D. Camp,

Richmond, has been chosen to represent the Virginia Heart Association for a three-year term as a member of the National Board of Directors of the American Heart Association. The election took place in San Francisco in October during the annual meeting of the Association.

Dr. Hundley Improving.

Dr. John T. T. Hundley, Lynchburg, who was injured by an automobile on October 6th, is well on the road to recovery. He suffered a fracture of the right side of the skull, broken right arm and leg, fractured ribs, ruptured right ear drum and fractures of the pelvis. A picture of him in a recent Lynchburg paper looked as if the "enforced rest cure" was agreeing with him and he certainly appeared in the best of spirits.

American Board of Obstetrics and Gynecology

The next scheduled examinations (Part II), oral and clinical for all candidates will be conducted at th Edgewater Beach Hotel, Chicago, Illinois, by the entire Board from May 8 through 19, 1959. Formal notice of the exact time of each candidate's examination will be sent him in advance of the examination dates.

Candidates who participated in the Part I examinations will be notified of their eligibility for the Part II examinations as soon as possible.

Current Bulletins of the American Board of Obstetrics and Gynecology, outlining the requirements for application, may be obtained by writing to the Secretary: Robert L. Faulkner, M.D., 2105 Adelbert Road, Cleveland 6, Ohio.

Dr. Wendell J. Pile,

Warwick, was guest speaker of the Wythe Woman's Club of Hampton at their meeting in September. His subject was Mental Health.

Dr. Houston L. Bell

Has been re-elected president of the Roanoke unit of the American Cancer Society.

Changes at University of Virginia.

Dr. Thomas H. Hunter, Dean of the School of Medicine, has announced the appointment of Dr. Lever F. Stewart as assistant professor of neurology, Dr. William Patrick Coleman of Lynchburg as a visiting lecturer in medicine, and Dr. Leon Salzman, Washington, D. C., as a visiting lecturer in psychiatry.

Dr. Frank J. Curran has resigned as professor of neurology and psychiatry, effective November 30th, to enter private practice in New York City.

Dr. William W. Reingold has also resigned as instructor in obstetrics and gynecology.

Dr. David William Scott, Jr.,

Fredericksburg, has been elected president of the local Kiwanis Club.

International College of Surgeons.

The Southwestern Regional Meeting of the International College of Surgeons will be held at the Americana Hotel, Bal Harbour, Miami Beach, Florida, January 4-7, 1959. This meeting has been approved for general practitioners also by the American Academy of General Practice for Category I credit.

A program may be obtained from Dr. Harold O. Hallstrand, general chairman, 7210 Red Road, South Miami, Florida.

Dr. Andrew F. Giesen,

Radford, has been re-elected as president of the Montgomery County Chapter of the Society for Crippled Children and Adults.

New Orleans Graduate Medical Assembly.

The twenty-second annual meeting of this Assembly will be held at the Roosevelt Hotel, New Orleans, March 2-5, 1959. Full information may be obtained from the secretary, Dr. Maurice E. St. Martin, 1430 Tulane Avenue, New Orleans.

The 15th Annual Clinical Tour will be held in Mexico, leaving New Orleans on March 6th, and visiting Mexico City, Cuernavaca, Xochimilco, Taxco, Acapulco, and San Jose Purua.

Van Meter Prize Award

The American Goiter Association again offers the Van Meter Prize Award of $300.00 and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The award will be made at the annual meeting of the Association which will be held in the Drake Hotel, Chicago, Illinois, April 30, May 1 and 2, 1959.

The competing essays may cover either clinical or research investigations, should not exceed 3,000 words in length and must be presented in English. Duplicate typewritten copies, double spaced, should be sent to the Secretary, Dr. John C. McClintock, 149½ Washington Avenue, Albany 10, New York, not later than January 15, 1959. The Committee who will review the manuscripts is composed of men well qualified to judge the merits of the competing essays.

A place will be reserved on the program of the annual meeting for the presentation of the winning essay by the author if it is possible for him to attend.

American College of Surgeons.

All members of the medical profession are invited to attend a three-day Sectional Meeting of the American College of Surgeons in Charleston, South Carolina, January 19-21, 1959. The program will include discussions on arterial occlusive disease, abdominal emergencies, management of gastrointestinal hemorrhage, trauma, cancer, common duct strictures, massive hemoptysis, acute hand injury reconstruction, cholecystitis, and many more topics of current concern. An exceptional program of medical motion pictures will also be shown.

X-ray Technician

Wants job. Completed one year's training at University of Virginia Hospital. Prefers small hospital or clinic. Contact Everett Jackson Wilson, Route 1, Box 176, Covington, Virginia, or phone Covington 2-3832. (*Adv.*)

Doctor's Suite Available.

Center of Clarendon—a thriving and fast-growing community in Arlington, Virginia. (Arlington and environs—3 miles from Washington—has a population of 150,000.) This suite has five newly-decorated rooms in a brick medical building in which there is a pediatrician and an eye, ear, nose and throat specialist. Both of these physicians have large established practices—ideal for referral purposes. Parking lot adjacent to building for specific use of physicians and their patients. May share secretarial help with adjoining suite. Ideal for general practitioner or internist or other specialty. Contact #550, care Virginia Medical Monthly, 4205 Dover Road, Richmond 21, Virginia. (*Adv.*)

For Sale

One portable Picker X-Ray Unit. Used. Contact Dr. Melvin B. Lamberth, Jr., Kilmarnock, Virginia. (*Adv.*)

House Physician Wanted

For 150 bed general hospital located in beautiful area of Virginia. Congenial staff, excellent general practice residency, excellent salary, full maintenance, fringe benefits. Full particular first letter. Personal interview mandatory. Write #525, care the Virginia Medical Monthly, 4205 Dover Road, Richmond 21, Virginia. (*Adv.*)

Obituaries . . . .

Dr. Courtney Edmond,

Prominent physician of Clifton Forge, died November 2nd, at the age of eighty-two. He was a graduate of the Medical College of Virginia in 1903. Dr. Edmond practiced for five years in Richmond and Norfolk before joining the staff of the Chesapeake and Ohio Hospital in Clifton Forge. He specialized in eye, ear, nose and throat diseases. Dr. Edmond was the first local doctor to be elected to the American College of Surgeons. He was a Life Member of The Medical Society of Virginia, having joined in 1907.

Dr. Edmond is survived by his wife and a niece and nephew.

Dr. Lloyd Campbell Agnew,

Lynchburg, died October 9th. He was forty-two years of age and a graduate of the Medical College of South Carolina in 1939. Dr. Agnew limited his practice to anesthesiology. He had been a member of The Medical Society of Virginia since 1954.

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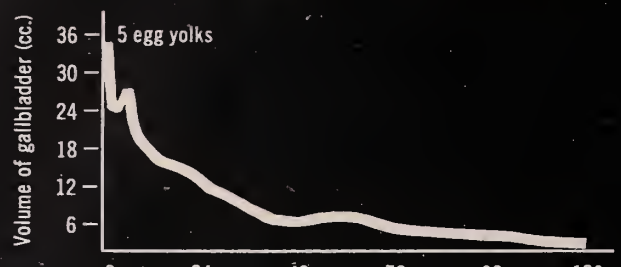
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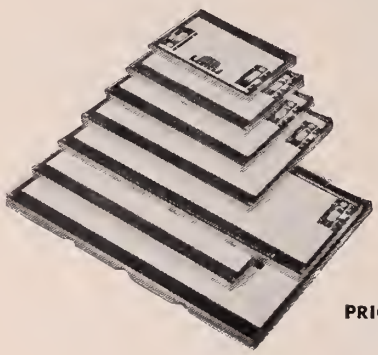
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Syrup: Each teaspoonful (5 cc.) of caramel-flavored syrup contains 250 mg. of sulfamethoxypyridazine. Bottle of 4 fl. oz.

references:
1 Grieble, H.G., and Jackson, G.G.: Prolonged Treatment of Urinary-Tract Infections with Sulfamethoxypyridazine. *New England J. Med.* 258:1-7, 1958
2. Editorial: *New England J. Med.* 258:48-49, 1958.

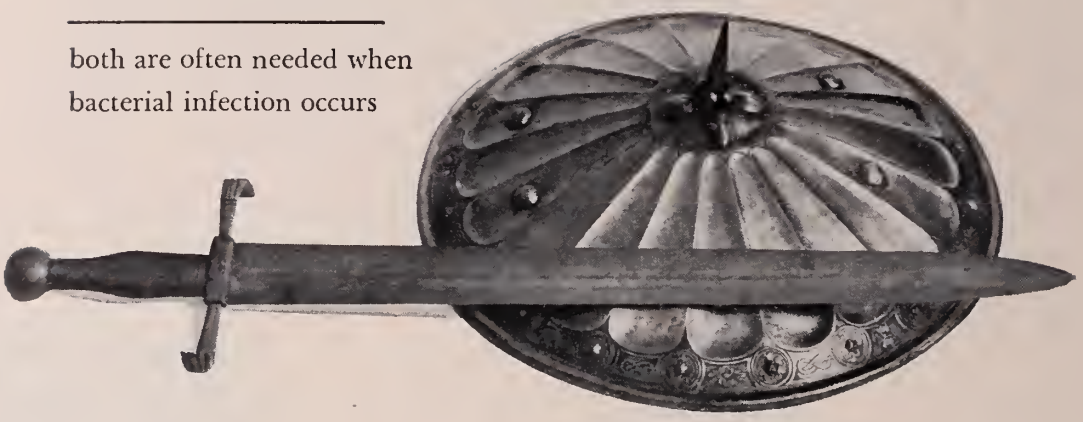
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It provides the new chemical form of the world's most widely prescribed broad spectrum antibiotic.

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It acts to prevent the monilial overgrowth which frequently occurs whenever tetracycline or any other broad spectrum antibiotic is used.

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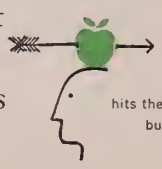
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Demerol hydrochloride	30 mg. (½ grain)

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Usual dosage: 1 or 2 tablets q.i.d. *before meals* and at bedtime.
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For clinical supply and literature, write Dept. 58-B

1. *Friedlander, H. S.: The role of ataraxics in cardiology. Am. J. Card.* **1**:*395, March 1958.*
2. *Shapiro, S.: Observations on the use of meprobamate in cardiovascular disorders. Angiology* **8**:*504, Dec. 1957.*

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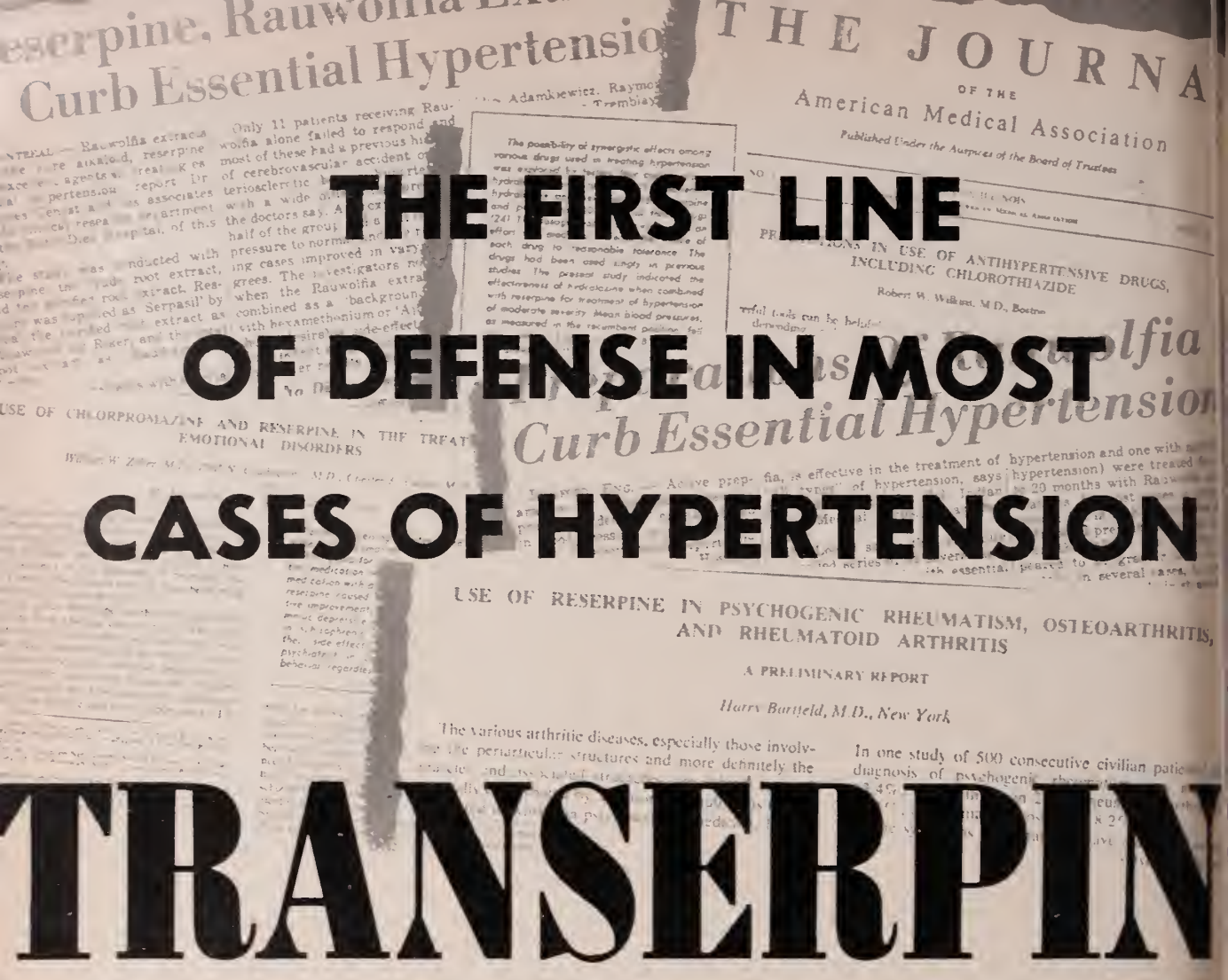
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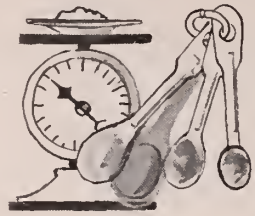
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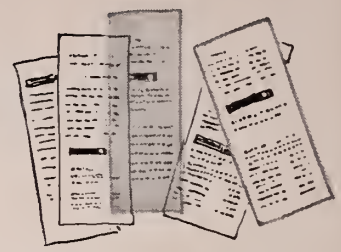
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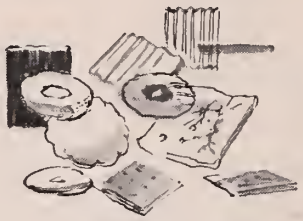
Punctual Meals



Light Snack



Safety Measure

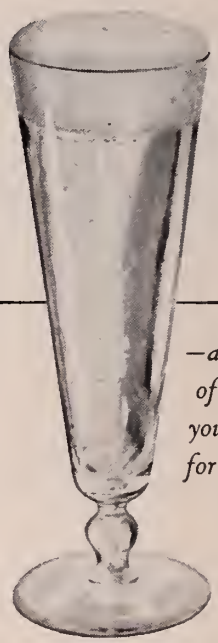


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Varied Choice

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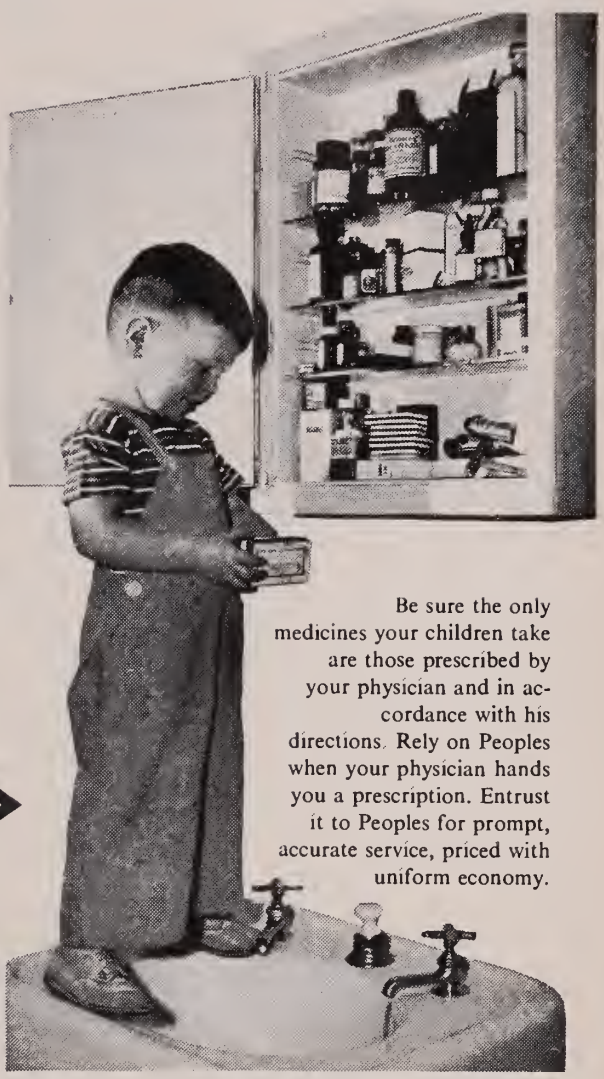
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REFERENCES:

1. Eisenberg, B. C.: Clinical Medicine *5*:897-904 (July) 1958.
2. Feinberg, A. R., et al.: J. Allergy *29*:358 (July) 1958.
3. Robinson, H. M., et al.: So. Med. J. *50*:1282 (Oct.) 1957.

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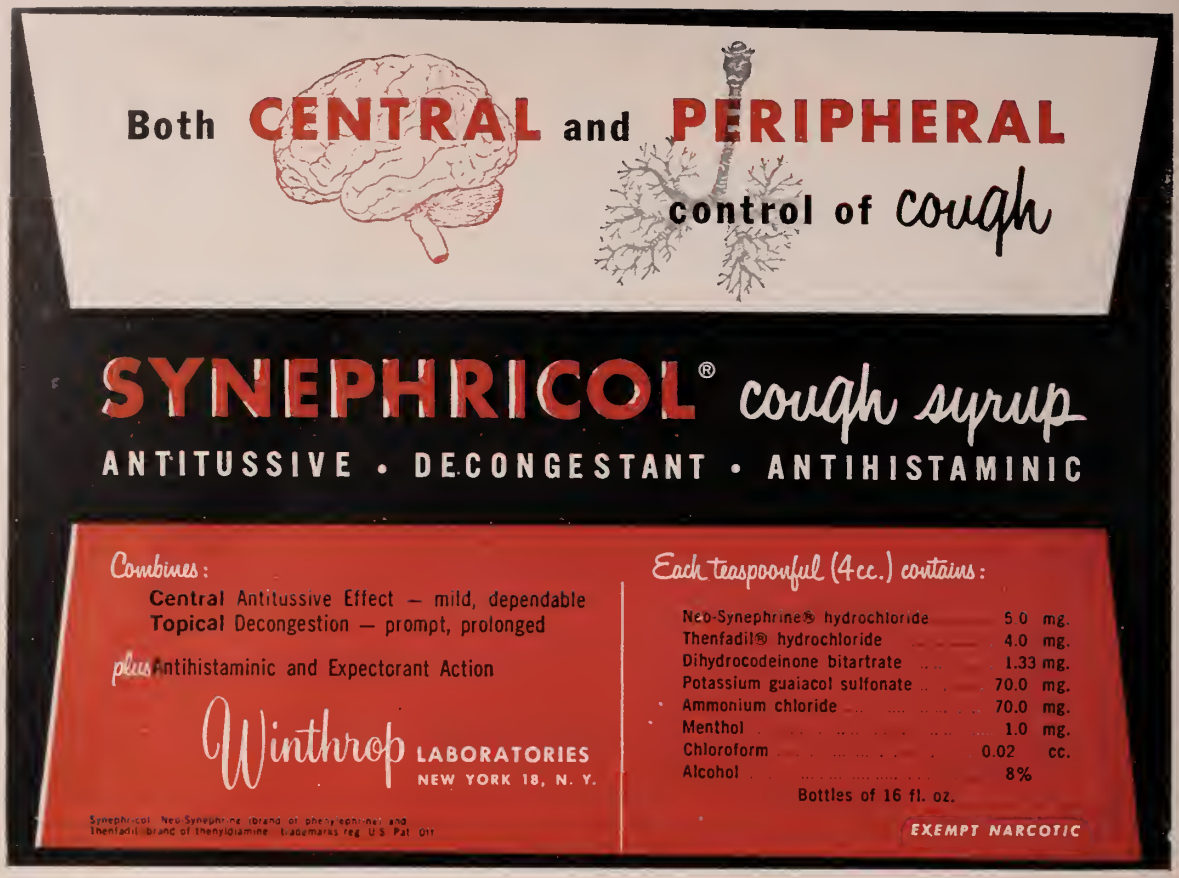
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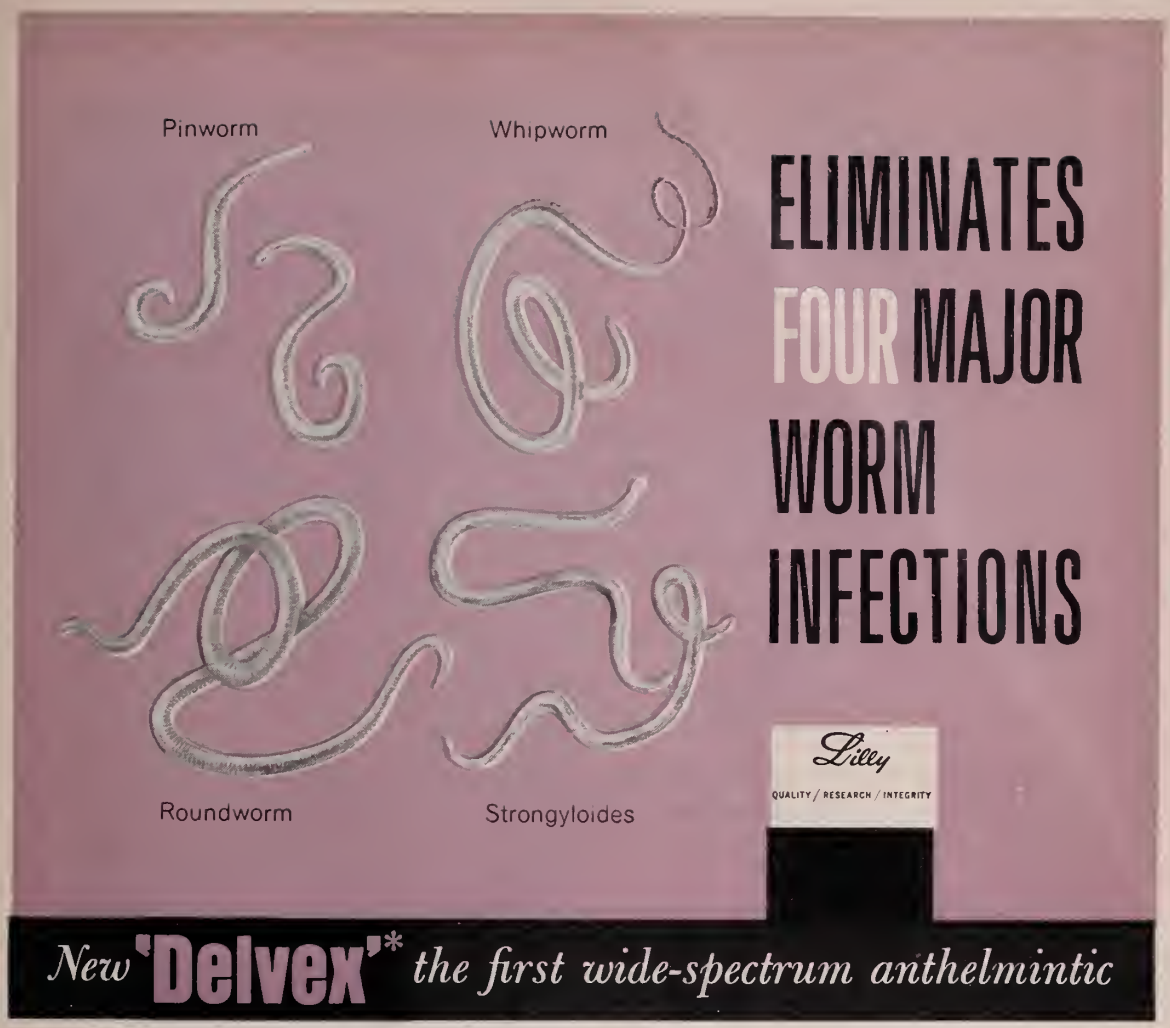
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1. Swartzwelder, J. C., et al.: J. A. M. A., 165:2063, 1957.

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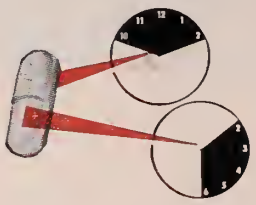
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